

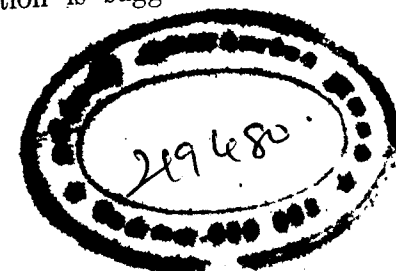
POLICE COMMITTEE

REPORT.

The committee was appointed to consider whether any, and if so what, retrenchment could be effected in the present expenditure on the police without detriment to efficiency. The objects of the retrenchment were stated to be to provide funds for accelerating the building programme and for other projects which recent events have shown to be necessary, of which the most important was the formation of adequate striking forces. The committee consisted primarily of magistrates and police officers, but Messrs. Natesa Mudaliyar and Subbarayan, as members of the Finance Committee of the Legislative Council, were asked for and gave their assistance. Subsequently Sir P. Tyagaraya Chettiyar, the Raja of Ramnad and Mr. O. Tanikachalam Chettiyar were asked to join. Sir P. Tyagaraya Chettiyar expressed his inability to do so and the invitation to Mr. Tanikachalam Chettiyar was sent after the committee had already had two sittings and was nearing the completion of its labours, and under the circumstances he did not feel justified in coming in so late. The Raja of Ramnad accepted the invitation, but was unfortunately prevented by other engagements from attending the meetings, though he sent in a memorandum after reading the written opinions of the official members and the notes of the proceedings of the first two days. The opinions expressed in his memorandum naturally do not coincide altogether with the conclusions arrived at by the committee after discussion. As a basis of discussion before the committee met various suggestions as to ways in which retrenchment might be possible were embodied in three memoranda; these were communicated to the official members of the committee with a request that they would submit written reports discussing the proposals and making any fresh suggestions which they might think useful. Their reports were printed and circulated to all the members of the committee with the request that any member who wished to make further remarks would do so. Further reports were received from three officers and all the papers were put before the committee, which sat on the 6th, 7th and 14th April and discussed them and also certain further questions which had been referred to it. Mr. Davis was unable to attend the meetings on the 6th and 7th; and Messrs. Tyler and Ramanuja Ayyangar were unable to leave their districts a second time and were consequently absent on the 14th. Mr. Hannington also proceeded on leave on the 13th and could not come on the 14th. Messrs. Filson and Bhavanandam Pillai were therefore asked to attend on that day.

2. SUPERIOR OFFICERS.—The first suggestion that was put before the committee was that the number of Deputy Inspectors-General might be considerably reduced. There are at present four Range Deputy Inspectors-General, one Deputy Inspector-General in charge of Railways and the Criminal Investigation Department and one who holds the post of Commissioner of Police for the City; and the suggestion was that in place of the first five there might be only one, who would be stationary at headquarters, would assist the Inspector-General in disposing of appeals (the number of which would be reduced by increasing the powers of the Superintendents), would act as his deputy when he was on tour and would also control the Railway Police and the Criminal Investigation Department. This officer would in fact combine the functions now performed by the Deputy Inspector-General of Railways and Criminal Investigation Department and the Assistant Inspector-General besides dealing with the appeals against orders of punishment passed by the Superintendents; and the only inspection of the work of the District Superintendents would be what the Inspector-General himself would undertake.

3. The committee has not thought it necessary to go into the question whether the practical abolition of a grade to which most, if not all, Superintendents have had before them the prospects of promotion, would be a breach of faith with the existing members of the service; nor into the effect which such action would have on recruitment. These matters have been fully dealt with in the written replies sent by some of the members and are deserving of serious consideration before the Government commit themselves to any proposal of a drastic nature. Apart from this the committee does not see its way to recommend any larger retrenchment under this head. It considers that the duties which would be thrown on the Inspector-General and the one Deputy Inspector-General whose retention is suggested in the memorandum



are far beyond the capacity of any two officers ; and it is convinced that the loss of efficiency by the abolition of the Range Deputy Inspectors-General would be so great as to outweigh the benefits of the retrenchment. The Range Deputy Inspectors-General are needed not only to supervise and co-ordinate the work of Superintendents and to dispose of appeals, but still more to keep the Inspector-General informed of the work of the districts to an extent to which it is impossible for him to attain through his own inspections. It is not every Superintendent who is an officer of sufficient experience to administer his district without more detailed control and supervision than he can get from the Inspector-General ; the best Superintendent is often glad of advice and suggestions ; and it is not only in connexion with organized gangs of criminals that co-ordination is required. As to the number of Range Deputy Inspectors-General that is absolutely necessary the committee was not unanimous. The two non-official members present would like, in view of the necessity for retrenchment, to divide the Presidency experimentally into two ranges ; the police members consider that four are necessary ; Mr. Narayana Reddi thinks that three should be enough ; while Mr. Tyler's view is that any reduction in the present number would lead to some loss of efficiency, but that a reduction below three would lead to such loss of efficiency that under existing circumstances it would be unwise to take the risk. On the whole the committee is of opinion that the Government might consider the abolition of one post of Deputy Inspector-General as the limit of retrenchment now desirable in regard to this grade.

4. If it is conceded that the number of Range Deputy Inspectors-General should be reduced to three, the committee is unanimous in thinking that there should be a Deputy Inspector-General in control of Railways and the Criminal Investigation Department ; and it is only in case a fourth Range Deputy Inspector-General is retained that two members (Dr. Subbarayan and Mr. Davis) would like an investigation into the question whether these branches of police work cannot be entrusted to an officer of the rank of District Superintendent of Police. The general opinion is that the present arrangement cannot be disturbed without undue detriment to the work. It is recognized that the head of the Criminal Investigation Department should be an officer of great experience and one of rank sufficient to command obedience from the district staff with whom he has official dealings as well as with the officers and men under his immediate control.

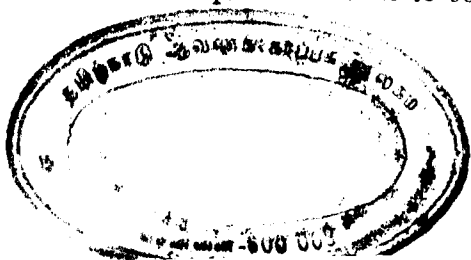
5. The committee sees no possibility of reducing the number of Superintendents. The charge of a District Superintendent of Police cannot well extend beyond that of a District Magistrate ; the districts of the Madras Presidency are nearly all large and the only one, the size of which might suggest that it could be supervised by an officer of lower rank than a District Superintendent of Police, is the Nilgiris. Even here the work is by no means negligible and special conditions make it desirable to retain it as a separate charge. The Coimbatore district is, if anything, too heavy a charge already and no addition to it is possible ; and geographical difficulties preclude any other re-arrangement. If, however, it is found possible or desirable to alter the limits of any revenue districts and so reduce the number, a reduction in the number of police districts would normally follow. As regards the two posts of Assistant Inspector-General and Personal Assistant to the Deputy Inspector-General of Police, Railways and Criminal Investigation Department, the committee is strongly of opinion that the former should be filled by an officer of the rank of Superintendent. His responsibilities are great, especially when the Inspector-General is away from headquarters and the fact that he has to issue orders to the district staff renders it necessary that he should be an officer of considerable seniority. In respect of the latter, the non-official members were naturally not in a position to offer a decided opinion ; the official members were convinced that an officer of the rank of Superintendent was necessary. A consideration which influenced the decision of the committee with regard to these posts as well as certain posts in the city was that continuity could only be secured by the appointment of Superintendents. It would be most inadvisable to appoint any but the most senior Assistant or Deputy Superintendents and these would in most cases be shortly due for promotion, when they would have to vacate. There is ample work for all these officers.

6. The committee agrees that there is no good reason for relieving District Superintendents of Police of divisional charge. The District Superintendent of Police should in its opinion be able to combine this charge with supervision over his

assistants or deputies. It is the general opinion also that it is only in exceptional circumstances, such as those of the Agency Division, that the Superintendent needs a personal assistant, though there may be districts in which it is desirable that one of the subdivisional officers should have his headquarters at or near the district headquarters so that he may be within call of the District Magistrate when the District Superintendent of Police is away. Whether any substantial increase in the number of subdivisions is called for can only be decided on an examination of the conditions of each district and the decision must depend largely on the conclusions arrived at with regard to the lower ranks. Pending examination the committee does not think that any addition to the cadre of Deputy Superintendents is necessary. One police member (Mr. Sayers) considers that few, if any, districts should need more than two officers of the rank of Assistant or Deputy Superintendent in addition to the District Superintendent of Police, while some districts could do with less ; and the abolition of personal assistants should provide enough officers for all the subdivisional charges.

7. CITY POLICE.—In their written replies some members of the committee acquiesced in the suggestion that the post of Commissioner of Police might be held by an officer of the rank of District Superintendent of Police. After perusal of the replies of other members and after discussion the committee, as a whole, concluded that the Commissioner ought to be an officer of the rank of Deputy Inspector-General. For good and sufficient reasons he has been placed in a position of comparative independence ; he has to deal with a variety of situations which do not arise in a district and with classes of people with whom a District Superintendent of Police seldom comes in contact. It is recognized in the memorandum that there can be no appreciable economy on his pay and the committee thinks there should be no diminution of his status. It is also of opinion that, if the standard of police work in the city is to be efficiently performed, there can be no cutting out of the other superior posts. The Commissioner needs two deputies of fairly high standing ; and though it might be possible to entrust the work to selected Assistant or Deputy Superintendents, they would have to be senior officers of experience and proved capability and it would seldom be possible to retain officers of that grade long enough to enable them to get thoroughly acquainted with the conditions. Both the Assistant Commissioners have their own special duties and the abolition of these posts would entail loss of efficiency ; but if retrenchment in the higher ranks is absolutely necessary the office which can be abolished with least detriment to the proper carrying out of the duties of the police is that of the Assistant Commissioner in the southern range. The committee cannot recommend the abolition of the Assistant Commissioner attached to the Commissioner's office who is directly concerned with the Intelligence Department and licensing.

8. In the memorandum it is suggested that, if the inspectors cannot be abolished their number might be reduced by half and that the number of sub-inspectors also might be reduced by half on the ground that it is not necessary to post one European and one Indian sub-inspector at each station. In the opinion of the committee the inspectors cannot be dispensed with, the reasons being much the same for the city as for the mufassal. It is informed also that it is not the invariable practice to post one European and one Indian sub-inspector to each station. The total number of inspectors in the city force is now fourteen and the total number of sub-inspectors is eighty-three. Of the inspectors, one is the reserve inspector, one has been newly sanctioned to attend to motor traffic regulation, two are prosecuting inspectors, two are attached to the Intelligence Department and eight are in charge of divisions, including the harbour. Of the sub-inspectors three are attached to the harbour station and forty-four to the other twenty-two stations ; five are in the Intelligence Department ; two are court sub-inspectors, whose duty is to keep order and make arrangements for the service of process and the due production of accused persons ; four are engaged with the two inspectors in prosecution ; one is in charge of the horses and stables ; two are for hackney carriage work ; and four for motor traffic regulation. The balance of eighteen is a reserve which supplies the places of men on leave, on other duty (acting as inspectors, etc.) and under training ; and it must be remembered that every new recruit to the rank of sub-inspector has to undergo a period of training before he can be given responsible work ; and that the standard of education required of sub-inspectors in the city is higher than



in the mufassal, so that head constables can seldom be promoted to act. The strength of the reserve was raised to eighteen in 1918 on the representation of the Commissioner that the previously existing reserve of nine was insufficient.

9. One of the police members of the committee—Mr. Sayers—has made various suggestions for retrenchment in the city police. These include a considerable reduction in the strength of the armed reserve, the abolition of the Intelligence Department as a separate entity, the placing of each station in charge of a single sub-inspector and some slight reduction in the number of inspectors. The committee as whole thinks it would be unwise, in the light of recent happenings, to reduce the armed reserve. The value of the Intelligence Department is strongly insisted on by Mr. Hannington, who is supported by the Inspector-General from his own experience as Commissioner; and a majority of the committee agrees that an Intelligence Department is necessary, but considers that in view of the fact that many of the duties which it performs are elsewhere the duties of the ordinary station staff, its existence should be taken into account in calculating what is necessary to man the stations. It recognizes that a strict limitation of sub-inspectors to one per station is impracticable because some have to deal with more crime and more difficult classes of cases than others and that conditions may vary from time to time; but thinks that there should be room for a reduction in the total number of sub-inspectors attached to stations and that a case should be made out for each station to which it is desired to attach more than one. It suggests that the Commissioner should be asked to report to Government in detail on this matter and on the question of reducing the number of inspectors' divisions at least by one. The present allocation of divisions dates back to more than thirty years; and though the problems to be dealt with by the police have become more complex, the means of communication have improved so much in recent years that a reconsideration seems called for. There appears to be no possibility of reducing the prosecuting agency, and the non-official members inform the committee that here, as in the mufassal, it is unlikely that vakils could be engaged for the duty on terms which would lead to economy. It appears possible however that an examination of the duties of the court sub-inspectors might show that they could be performed by men of lower rank than sub-inspectors, or that army pensioners might be employed at less than the present cost; and this examination, the committee thinks, should be made. It is of opinion that the other posts are necessary; but that, if a reduction on the lines suggested can be carried out, there might be a corresponding reduction in the reserve of sub-inspectors.

10. The committee is of opinion that there should be no reduction in the mounted police in the city. The number of mounted men is already small; they are of great use in regulating traffic, conducting processions and controlling crowds of all kinds and this work cannot be done equally well by men without horses. The only way in which a reduction in the number of horses can be effected therefore is by the substitution of motor vans for the present horse vans in use for the removal of prisoners. It is understood that the price of horses has fallen considerably in the past year and that therefore the expense of maintaining the mounted force is not so high as to make retrenchment in this manner urgent.

11. The non-official members are especially insistent on the improvement in the conditions of the city which has been brought about by the recent expansion of the police force which has made possible the restoration of the divisions to their former strength. They state that until this was brought about it was almost impossible to find a constable anywhere, whereas now there is no such difficulty.

12. SUBORDINATE STAFF.—The most sweeping suggestions put before the committee were those with regard to inspectors and sub-inspectors generally. They were in effect that the place of the sub-inspector as the officer in charge of the police station and immediately responsible for investigation into crime should be taken by the head constable; that the best of the existing sub-inspectors should be retained to supervise the investigation and under some new title such as 'investigating officers', have charge of two or more stations each; that there should be no inspecting officer between these and the Assistant or Deputy Superintendent in charge of the division, the inspector being dispensed with except for those in charge of the armed reserves, the prosecuting agency and a few in large towns; and that for the purpose of dealing with specially difficult cases there should be at the headquarters of each

district a picked detective staff of perhaps one inspector and two or three sub-inspectors. It was pointed out that the results achieved by the system introduced on the recommendations of the Police Commission of 1902-03 have been disappointing; that the class of men attracted to the sub-inspector grade has been lower than was expected; and that there have been repeated complaints, in administration reports and elsewhere, of the inferior quality of their work. Reference was made to statistics to show that grave crime has increased rather than decreased and that there has been no improvement in the percentage of detection or of property recovered. The fact that the pay of the constable and head constable is now much higher than it was twenty years ago was given as a reason for expecting that the class of men recruited should be better; and the fact that they are recruited from a stratum of society more nearly approaching that of the criminal than the sub-inspector, for anticipating that their means of obtaining information should be more effective. Two of the police members of the committee are in favour of a reversion to the old system of head constable station-house officers, but of these one—Mr. Moore—admits that he has had little experience of the work of sub-inspectors. The other—Mr. Ramanuja Ayyangar—had some experience of the working in Trichinopoly of the experiment under which inspectors were dispensed with and sub-inspectors worked directly under Deputy Superintendents, and differs from the general view that the experiment was a failure. At the same time he is of opinion that the present class of sub-inspectors should go and that their places should be taken by an improved class of head constables. Between these and the gazetted officers he would place only the 'investigating officer,' chosen from among the best of the present sub-inspectors and of the future station-house officers, more or less in the position of the old time circle inspector, but with a charge consisting of not more than two or three stations. The other police members are strongly opposed to any return to the methods in force in the days before the Commission. They admit that the sub-inspectors have not altogether fulfilled expectations; they ascribe the failure generally to a want of careful selection of candidates and the retention of men who, without being guilty of any positive misconduct, have shown themselves of little use as police officers. They deprecate any condemnation of sub-inspectors generally and regard it as an entirely mistaken view that the reputation of the police force as a whole has not greatly improved since the reorganization. In support of this contention they quote authoritative opinions. Statistics of detection and recovery of property, they urge, prove nothing; in former days a very small proportion of the crime committed was ever reported, whereas now, they contend, few crimes are unreported; while many of the old head constables were efficient, the majority of them were dishonest and their methods were open to serious objection; while, if they could be revived they would be of comparatively little use under modern conditions, when people are far more insistent on their rights, communications are rapid and the legal talent with which they would have to contend in the courts is very much greater. The class is moreover extinct and could not now be resuscitated. In the early days, when these old head constables and the inspectors who had worked with them were still in the force the sub-inspectors were greatly handicapped; but now that most of the inspectors are men who have been promoted from the sub-inspectors' grade there is not the same friction, though in some cases they do not receive the support and assistance they have a right to expect, and the Police Order 142 (since altered) which forbade an inspector to investigate did much to prevent harmonious working. It is admitted that a certain amount of investigation is now conducted by head constables, but this is inevitable since, if a crime is reported when the sub-inspector is already away investigating another, the only alternative to allowing the head constable to go to the scene and commence the investigation would be an amount of delay which would in all cases be undesirable and in many would effectively destroy all chance of detection. The rule is that, even where an investigation has been begun by a head constable, the sub-inspector must take it up as soon as possible; and the first question that would be asked by an inspecting officer who found that a head constable had been investigating would be why the sub-inspector had not done it himself. The ability of the present day head constable to conduct any but the most simple investigation satisfactorily is universally denied, as is also the suggestion that the increases in the pay of constables and head constables which have been sanctioned in recent years have

resulted in the recruitment of an appreciably superior class of men. Until these increases were sanctioned it was difficult, and often impossible, to recruit up to the sanctioned strength ; and though the pay of these ranks has increased more than in proportion to the cost of living since 1914, a part of the increase represents what was then overdue ; and the resultant whole, so far as the constable is concerned, is hardly more than the market price of a day labourer.

13. To the argument that the head constable should be better able than the sub-inspector to obtain information about crime and criminals because he himself is drawn from a lower social stratum, the answer is that this fact is in itself a reason for not allowing the head constable to work without the closest supervision. It is possible that, in some cases, a head constable may be in a better position to obtain information than a sub-inspector, but in almost every case the sub-inspector is more capable of making proper use of the information when obtained. The man of inferior social status is more easily amenable to corruption or intimidation ; there is a danger that he may think it more advantageous to himself not to enquire too closely into the facts or to burk information that he has obtained, if he has any independent position. This danger is to a large extent obviated by the presence of the sub-inspector in immediate control. Sufficient stimulus to good work now exists in the prospects of promotion from the rank of head constable to that of sub-inspector ; this is allowed up to 30 per cent of the cadre of sub-inspectors, and some of the members of the committee would increase the proportion of sub-inspectors to be so recruited ; but care must be taken to see that only those are promoted who, besides having good personal records, are possessed of sufficient intelligence and education to fit them for the higher responsibilities. Mr. Narayana Reddi is very strongly of the same opinion as regards the sub-inspector as the majority of the police members. Mr. Tyler, while regarding the proposal to revert to the old system of head constable station-house officers as radically unsound, offers as a suggestion, in case retrenchment in this direction is absolutely necessary, the classification of stations into two classes, according to the amount and difficulty of the work in each, and the placing of first-class stations in charge of sub-inspectors and second-class stations in charge of head constables ; and a similar classification of circles, the more important being put under inspectors and the less important under sub-inspectors. To this the police members reply that no permanent classification of the kind is possible ; apart from the fact that the amount of crime to be dealt with at a station must vary from time to time, it would be continually necessary (as indeed is the case now, owing to the variations in the capacity and energy of different sub-inspectors) to transfer the best officers, who would be of the sub-inspector class, to stations the work of which had been allowed to fall below the standard by the inferior officers who had been in charge. Mr. Davis also is opposed to the abolition of the sub-inspector, though he would terminate or restrict direct recruitment to the grade, relying mainly on promotion from the rank of head constable ; on the other hand he would, in order to lighten the ranks with men of more intelligence than can be expected from those who are recruited as constables, throw open a fixed percentage of the posts of head constables to direct recruitment. The majority of the committee doubt whether a satisfactory class of men could be recruited directly as head constables and observe that even now men with better qualifications are attracted to the Revenue Department, where the starting pay is Rs. 35, than to the Police, where a sub-inspector starts on Rs. 65. This they regard as due to the more exacting nature of the work and the unpopularity which still attaches to employment in the Police. On the whole they are convinced that it would be a retrograde step to revert in any measure to the old system ; that any economy so effected would be dearly bought ; and that the reorganization effected as the result of the Police Commission has really raised the tone and reputation of the police to an extent hardly realized by those who do not remember the conditions existing before the Commission sat. They consider that, while most of the sub-inspectors are useful and conscientious officers, the chief defect of the present system is that the rank contains many individuals who are not worth their pay. Many of these should never have been allowed to pass the probationary stage ; others should have been got rid of as soon as it was clear that they had no real aptitude for the work. Until what Mr. Sayers describes as the drones are eliminated the general average of prevention and detection of crime is not likely to improve very much.

The committee would like an enquiry to be instituted as to which sub-inspectors should be dispensed with, though financial considerations may at present stand in the way of removals which will involve compensation ; and it would suggest that some, who, though not good police officers, have good personal records, might be provided with appointments in other departments. It considers that in principle there should be no hesitation in getting rid of sub-inspectors who are not up to their work, though they should be compensated if they are turned out after having passed the probationary stage ; that there should be more rigid selection before appointment in future ; and that the time-scale should be abolished in favour of a system of grade, promotion from one grade to the next being denied to any man who has not shown himself a keen and intelligent police officer. There should not be too many men in the lowest grade, which should in fact be regarded more or less as a probationary stage during his continuance in which the young sub-inspector should show his fitness for retention in the force. Mr. Ramanuja Ayyangar however dissociates himself, for the reasons given in his written opinion, from the proposal to substitute grade promotion for the time-scale. Mr. Venkoba Rao is prepared, in the interests of economy, to reduce the number of stations (and incidentally of circles) on the ground that the area constituting the jurisdiction of many of those now in existence is smaller than that recommended by the Police Commission. Mr. Ramanuja Ayyangar, on the other hand, thinks that the number of investigating centres, whether they are to be under sub-inspectors or head constables, should be increased rather than reduced ; and the majority of the committee are of opinion that they cannot be reduced to any extent and therefore there can be no great reduction in the number of sub-inspectors. They would like detailed enquiries made with regard to this, however, since it is possible that the area served by some of the stations can be enlarged and that some stations in which there are now two sub-inspectors can be worked by one.

14. Of the official members of the committee only Messrs. Ramanuja Ayyangar and Narayana Reddi are prepared to dispense with inspectors, though several members are of opinion that the number might be reduced by one expedient or another. Mr. Venkoba Rao, as stated above, thinks that the circles might be enlarged, and he looks forward to a time when sub-inspectors may be able to work without assistance from above ; Mr. Davis considers that the inspectorate should be employed mainly, if not solely, on the detection and prevention of serious crime, being relieved of all other work of a merely supervisory nature which should be done directly by officers in divisional charge ; and that if this were done, a certain amount of concentration would be possible in areas where grave crime was not prevalent. Mr. Tyler thinks that experience has shown that the circle is an important link in the chain and that the circle inspector is, or ought to be, the backbone of the police administration. The remaining police members, with whom Mr. Davis associates himself, are of opinion that the retention of inspectors is absolutely necessary, and Mr. Sayers would even prefer to do without divisional officers, comparing the police without the inspector to an engine without a governor or pressure gauge. The committee is impressed with this practical unanimity of opinion. Inspectors are wanted, not only to maintain discipline and ensure the detailed inspection of the stations, but also to help the sub-inspectors in all difficult cases and circumstances. Police Order 142, as now revised, directs that on the occurrence of a crime of any importance the circle inspector should proceed to the spot without delay to supervise and guide the investigation and allows him, if circumstances require it or the Superintendent or the subdivisional officer so orders, to assume charge of the investigation himself. This, the committee thinks, hardly goes far enough. It does not wish the sub-inspector to be relieved of the responsibility for investigation but considers that the inspector should be encouraged to assist as well as supervise and guide and should be required to take a large part in the investigation of important cases. It would like a detailed examination of the question whether the number of circles and of inspectors cannot be reduced, but, in spite of the opinions of Mr. Ramanuja Ayyangar, it accepts the judgment of the superior officers who found that the experiment tried in Trichinopoly and Kurnool resulted in a dangerous relaxation of discipline, the loss of control over the rank and file of the force and an extensive hushing up of crime. The functions of the inspector cannot be adequately exercised by the divisional officer who, by reason of the wide difference in rank, cannot mix as freely with his sub-inspectors, and by reason of his comparatively large charge cannot exercise the same intimate control. It is not a fact

that the existence of inspectors renders sub-inspectors unnecessary or *vice versa*, or that the retention of both ranks involves a duplication of a subordinate supervising agency. The sub-inspector is not a supervising agency at all, but as station-house officer is the unit of administration and a subordinate supervising agency, in the shape of the inspector, is indispensable. Finally, as with the superior officers, it is essential for the maintenance of contentment and efficiency in the force that there should be prospects of promotion. The gap between the sub-inspector and the Deputy Superintendent is too wide to admit of direct promotion from the one to the other and in no case could the cadre of Deputy Superintendents be expanded to an extent which would provide opportunities for more than a very small proportion of the sub-inspectors, even if they were found deserving of such exaggerated advancement.

15. The general opinion is against the formation of a specialised detective staff in each district. Mr. Narayana Reddi was prepared to give the proposal a qualified approval but thought that divisional officers should investigate in person all murders and particularly serious crimes and Mr. Davis, as stated above, was inclined to think a certain amount of concentration possible if the main duty of inspectors was preventive and detective only; but other officers who have given an opinion on the point think that at best such a staff would be an unnecessary luxury, while it would divide responsibility, give opportunities both to the central and the station staffs of shirking their duties and lead to jealousy and friction. It is the duty of the station staff in the first instance to investigate crime and of the inspector to see that the investigation is on the right lines and to assist; while the District Superintendent of Police should be in touch with his men and can always depute a picked man or party to deal with any case that presents unusual difficulty.

16. The duties of the head constable are described generally in Police Orders 163 to 165. Ordinarily in every station there are two head constables, one for general duty and one as writer; each outpost is in charge of a head constable; some are on treasury and sub-jail guards and, especially in towns, they are put in charge of sections for patrol and other similar work. With regard to them the memorandum suggests firstly that the work of writers might be done by constables instead of head constables and that by this means the number of head constables might be reduced by about one thousand and secondly that some of the outposts might be done away with. The first suggestion has received a considerable measure of support from members of the committee in the first instance, but after discussion the conclusion arrived at was that though it should be possible to find a certain number of constables sufficiently educated to carry on the scriptory work especially of the smaller and less important stations, anything like a wholesale transfer of the writers' posts to men of the rank of constable would be most injudicious. In the first place it was pointed out that it is frequently the duty of the writer to register reports of crime in the absence of any superior officer and that so much often depends on how this duty is performed that it is only in the smaller stations that the responsibility could be entrusted to a constable. Even then he would have to be a picked man—in fact practically a probationary head constable. In the second place, under the law as it stands, in the absence of the sub-inspector the senior officer present is the officer in charge of the police station, and the sub-inspector and the general duty head constable may both be absent on investigation when a crime is reported; in which case the third in command may have to go out to investigate and it is generally agreed, whatever may be the opinion about investigation by a head constable, that investigation should not be entrusted to a constable if it can be avoided. Mr. Davis would go further and forbid investigation of any kind by a constable at all; and lay it down as a principle that if an officer authorized to investigate is not on the spot there should be no investigation until a sub-inspector or head constable is available to undertake it. He therefore advises extreme caution in reducing the number of head constables and adds that if, as a matter of economy a reduction is decided on, the public must understand that investigation must in some cases be delayed. The question seems to the committee as a whole to be one of fact and probability in regard to each individual station. The Inspector-General considers that in a large number of stations—which he estimates roughly at 500—constables might now take the place of head constables as writers, but that it would be necessary to give them allowances of, say, Rs. 5 each, in view of the added responsibility and in order to make them value the position and work to retain it. Mr. Sayers would revive for this purpose the rank of 'naik' (of which as formerly

tried in Coimbatore, however, he disapproves) but would treat his naiks as permanently on probation till they are promoted to the rank of head constable, so that they could be made to revert as constables at any time at the will of the Superintendent. The rank would include all outpost head constables, guard head constables, section duty head constables and station writers. The committee agrees that, if constables are made writers it will be necessary to give them allowances but even with these allowances they would cost less than head constables. It considers accordingly that a reduction in the number of head constables should be made on the lines suggested by the Inspector-General. It would not be necessary to add to the number of constables in order to provide writers. A detailed investigation would be necessary as to the stations in which the change should be made. A similar investigation is needed to decide which, if any, of the outposts can be abolished. There is a general opinion that some of those now in existence are superfluous though some members would depreciate any reduction of the number of centres at which crime can be reported and the police are in evidence, and there is no doubt that in nearly every case the abolition would meet with strong local opposition.

17. With regard to constables, the only suggestion put before the committee in the memorandum was that the system of time-scales should be abolished in order to provide an incentive to good work. With regard to this it may be remarked that constables are not now on time-scales in the ordinary acceptance of the term, in that they have to serve for a given number of years before they receive any advance in pay and there are only four stages. The committee does not advise any alteration in this system though some of the members were at first in favour of a change. It has been in force for a considerable time, though not at the present rates of pay; the present rates, with free quarters and other small amenities allowed, are not excessive for the purpose of attracting the right kind of recruit; the numbers are large and selection for promotion would present great difficulties (though special promotion for good work might be allowed); and if the further recommendations of the committee are adopted, there will be no recruitment for another year or two, and the terms on which those already in the force are serving cannot well be changed. Various suggestions have been made however for the reduction of the total number of constables. Mr. Sayers, besides suggesting some reduction in the city armed reserve and the reserves at Tinnevely and Tuticorin, is of opinion that, on an average, the strength of every station in the Presidency might be reduced by two constables. Mr. Moore suggests fifty constables in each district; Mr. Hannington a curtailment in the number of beats and possibly a reduction in the armed reserves; and Mr. Venkoba Rao, as a sequel to his proposal to reduce the number of stations, 1,200 constables; Mr. Davis has put forward an interesting scheme, under which he would abolish many of the rural stations on the present basis and replace them by investigating and reporting centres, each in charge of a sub-inspector or head constable with two constables, one of whom would have to be present always at the centre and the other would accompany his superior on investigation duty, more or less as an orderly. Connected with this is his proposal that the inspectors should form a picked detective force available for the investigation of complicated crimes, which they would take over from sub-inspectors and investigating head constables. In many places he thinks it would be enough to station one or two constables merely to receive reports and pass them on immediately to an officer empowered to investigate. At convenient centres, generally taluk headquarters, he would have a somewhat larger force than at present to deal with emergencies when called for. Beat work he would entrust to the village police, whom he would put into uniform; and the service of process (excepting warrants of arrest) to a process establishment attached to the courts. Arrests would be effected by the sub-inspectors or by constables sent from the central station. Mr. Ramanuja Ayyangar is very much in favour of a scheme more or less on these lines. The committee, while hesitating to recommend so drastic a change of system offhand, considers that an experiment on these lines might very well be tried in one district; but it is impressed with the general opinion that a reduction in the number of the rural police can be effected without appreciable loss in efficiency. The Inspector-General is of opinion that a reduction by about 2,000 should be possible in all and the committee recommends that an immediate examination should be made as to where the reduction shall take place. Until these numbers can be absorbed, there should be no further recruitment and it recommends further, if the Government approve, that the two recruit schools recently re-opened should be closed until fresh recruitment becomes necessary.

18. The armed reserves, besides providing a small emergency force in each district and orderlies for a few superior officers, supply guards for treasuries and some sub-jails and for sessions courts and escorts for prisoners and treasure. Whether there are centralized striking forces or no, the committee thinks that an armed reserve in each district is necessary; but it recommends that an inquiry should be made as to whether the armed reserve in any district can be reduced in any way in view of present necessities; and in particular whether it is necessary to maintain as separate forces the isolated bodies now stationed in such places as Tuticorin, Kamudi and Sivakasi. It suggests that the amalgamation of these with the district reserves may make some reduction possible on the whole.

19. There is a general complaint among the police members at the police budget being debited with the cost of ryotwari talaiyaris. It is so debited at present, though the cost of the talaiyaris is not included in the demand made to the Legislative Council for a grant for the police; and it is represented that they do no work for the police but are merely the servants of the village head. The transference of this debit to the head of Revenue would bring about no retrenchment on the whole and the committee is not in a position to recommend the abolition of talaiyaris as a class. Mr. Davis' scheme would bring them definitely into the police service. He instances cases where two constables have now to be sent out together, and where the place of one of them might be taken by a talaiyari. Mr. Tyler observes that there has recently been a very great reduction in village establishments and deprecates any further retrenchment in this direction. He points out that the village magistrates have many definitely police duties, but no part of their pay is debited to the police, so that though the talaiyaris may be used for other than police purposes, the police budget is not debited with an unfair share of the cost of the village establishment on the whole.

20. Several members have cast doubts on the utility of the ghat talaiyaris, the total cost of whom amounts to over one lakh of rupees per annum. Other members have quoted cases in which these ghat talaiyaris have proved their usefulness for the purpose for which they are entertained, namely, for affording security to travellers along lonely roads which are likely to be the scenes of dacoity. The Inspector-General is prepared to recommend as an experiment their abolition as a separate body except in a few exceptional localities, but suggests that the reduction of the number of constables would be facilitated if some purely police talaiyaris could be employed to provide for duties, such as night road patrols, which cannot be performed by a constable single handed, but do not necessarily require the presence of more than one police officer.

21. The committee has been asked to inquire whether any reduction is possible in the railway police force. It considers that this is a matter for detailed inquiry, which it is not in a position to undertake; but the opinion of those of its members who have any experience in the matter is that the force is not too large for the duties which now fall to its lot. Theoretically the duty of the police is confined to questions of crime and order, the railway administrations being responsible for watch and ward. In practice the railway administrations do not do their share, and most of the watch and ward duties that are actually performed are performed by the police. If the members of the police force now doing watch and ward duties were withdrawn, some reduction of the force would be possible; though it has asked for the information, the committee has not been able to ascertain how much. Until however the railway administrations have efficient organizations of their own, such a withdrawal would not be in the interests of the public; but in the meantime it seems clear that the contributions now paid by the railways towards the cost of the police are totally inadequate, both because they include no payment for this watch and ward duty and because they were fixed with reference to the cost of the police before the general increase of prices made large increases of pay for all ranks necessary. The police members are of opinion that the railway administrations never will organize efficient watch and ward establishments and that the only satisfactory arrangement would be one under which the police definitely took over the duties of watch and ward and the contributions from the railways were put on a proper and equitable basis.

22. The committee has been asked by the Retrenchment Committee to examine the questions (1) whether the expenditure now incurred on providing postal escorts, chiefly in the Chettinad, cannot be reduced; (2) whether the number of sub-inspectors attached to the Shorthand Bureau at Vellore cannot be reduced; (3) whether in lieu

of the uniform allowance of Re. 1 a month now given to all constables and head constables an annual lump sum of less than Rs. 12 cannot be substituted and (4) whether the allowance of Re. 1 per mensem now given to police constables recruited in the Bellary district, Madura town, Tuticorin, Negapatam and Nagore can be justified now that the pay of the police has been revised. The first and last of these questions however could only be investigated on the spot and though there appear to be good grounds for examining them, the committee is not in a position to conduct the examination, which should be entrusted either to the Inspector-General or to a special officer. On the second, which is one for the decision of Government the committee is not in a position to advise. The third also is one for inquiry from the Inspector-General.

23. To sum up, the conclusions of the committee are—

- (1) that the number of Deputy Inspectors-General cannot be reduced by more than one, the majority of the committee being of opinion that no reduction can be made without undue sacrifice of efficiency;
- (2) that there can be no reduction in the number of Superintendents except as a result of a reduction in the number of districts;
- (3) that there is no case for any large increase in the number of subdivisions though some increase may be desirable;
- (4) that as a rule a Superintendent has no need of a personal assistant, though there may be some exceptional cases and therefore that any increase that may be necessary in the number of subdivisions can be manned from the existing cadre;
- (5) that inspectors cannot be dispensed with though it may be possible to effect some reduction in the present number;
- (6) that sub-inspectors should be retained as the officers in charge of stations and as the ordinary investigating agency, though an inquiry should be instituted as to the necessity of the existing number of stations;
- (7) that inquiries should be made as to which of the existing outposts can be abolished;
- (8) that in all the smaller stations the place of writer head constables should be taken by constables, who should receive allowances of Rs. 5 each, an inquiry being made as to which individual stations can be regarded as smaller for this purpose;
- (9) that the strength in constables of all the stations should be examined with a view to the reduction of the total force by about 2,000;
- (10) that until these have been absorbed in the force the police recruit schools should be closed;
- (11) that there should be no change in the system of promotion of constables, but that in regard to sub-inspectors the time-scale should be replaced by a system of grades;
- (12) that there should be no change in the present organization and status of the officers of the Criminal Investigation Department;
- (13) that there should be no change in the organization or status of the superior ranks of the city police, but that if economy is to be effected it should be by the abolition of the post of Assistant Commissioner, Southern Range;
- (14) that inquiries should be made as to the possibility of reducing the number of inspector and sub-inspectors in the city;
- (15) that armed reserves are necessary in every district, whether there are separate striking forces or no, but that inquiry should be made as to whether in individual districts reductions are possible, and particularly as to whether isolated forces such as those at Tuticorin, Kamudi and Sivakasi should be maintained separately from the district reserves; and
- (16) that the duties now performed by the railway police should be examined and the question of the contribution paid towards their cost by the railway administrations should be raised with the Government of India.

Of the questions referred to it by the Retrenchment Committee, it understands that that with regard to the special allowances given to constables recruited in certain places is already under inquiry, but that inquiries should be made with regard to the postal escorts and the uniform allowances and that Government should consider whether the strength of the Shorthand Bureau can be reduced. Finally it recommends that for the purpose of the various inquiries it has suggested a selected police

officer should be placed on special duty ; or, in view of the fact that the inquiries will have to extend to details all over the Presidency that two such officers should be employed.

R. A. GRAHAM.
F. ARMITAGE.
E. A. DAVIS.
H. H. F. M. TYLER.
J. NARAYANA REDDI.
J. MOORE.
F. SAYERS.
T. VENKOBARAO.
M. RAMANUJA AYYANGAR.
J. T. W. FILSON (as successor to
P. HANNYNGTON).
C. NATESAN.

MINUTE BY THE RAJA OF RAMNAD.

I regret I am unable to agree with the conclusion of the majority of the members of the committee. I am fully conscious that nothing to be done should tend to weaken the forces of law and order. Retrenchment in the Police Department should have as its aim two objects—one, to reduce the cost which has gone up very considerably, nearly four times what it was in the year 1905 and, two, to improve the quality of the work done by this department for which a sum of two crores of tax-payers' money is to be spent annually. I am afraid the Government Order is not understood in this light. In the majority report pointed reference has been made to that portion of the Government Order which mentions the necessity for the formation of adequate striking forces and acceleration of building programme. The above two items, I venture to think, are given just to illustrate how a large amount of expenditure other than what has been provided for in the budget is still required to meet some of the urgent requirements of the Department.

In my written communication to the Chief Secretary I have suggested my own proposals and I do not wish to recapitulate them. The definite recommendations of the majority of the members of the committee in my opinion fall considerably short of public expectation. The conclusions are bound to create disappointment. It may be that the composition of the committee to a large extent is responsible for this.

The proposals now made by the committee, I am constrained to observe, are hardly adequate and are certainly not what may be reasonably expected from a Retrenchment Committee. The proposal in the majority report involves the abolition of one Deputy Inspector-General. Taking the average salary of a Deputy Inspector-General as Rs. 1,950 per month the saving would be Rs. 23,400 per annum. Since the constables who are appointed to do the work of the writer head constables would get an additional sum of Rs. 5 each, I think there would be, if at all, very little saving. The reduction of 2,000 constables taking the average pay of a constable as Rs. 20 would result in a saving of Rs. 2,88,000 per annum. The proposal to do away with the time-scale with reference to Sub-Inspectors and substituting a system of grade pay may, if at all, only create a legitimate discontent among that class of officers. The abolition of one Assistant Commissioner would result in a saving of Rs. 600, the average pay per month, or Rs. 7,200 per annum. So the economies suggested by the majority report would result only in a saving of Rs. 3,18,600. Even this is doubtful, for the majority report suggests the appointment of a selected police officer (or even two since the details of the inquiry will extend all over the Presidency) for the various further inquiries suggested therein and I take it that the minimum qualification required for a special officer would be that of a District Superintendent of Police if not that of a Deputy Inspector-General. So what is gained by the abolition of one Deputy Inspector-General and one Assistant Commissioner will be more than spent in the appointment of one or two selected police officers for merely conducting inquiries as to the possibilities of further economy. So the real saving according to the majority report will be roughly 2,88,000 or 3 lakhs brought about by reducing the number of constables by 2,000. To suggest merely a reduction of 3 lakhs of rupees in an

expenditure of Rs. 203.78 lakhs (budget estimate, 1923-24) is, in my opinion, grossly inadequate. The policy pursued in the report seems, in my humble opinion, to be one of least resistance. Unless the whole machinery is altered root and branch, of course without tending to weaken the forces of law and order, I am afraid not only the cost of the department will increase, but the present unsatisfactory state of its usefulness would also tend to continue if not deteriorate further. I should therefore suggest that a committee consisting of experienced non-officials or at any rate a majority of non-officials should be constituted to go into the matter who will bring a detachment of view to their considered judgment and the officers of the department should only be examined as witnesses by such a committee. Any investigation which does not result in a reduction of at least 35 to 50 lakhs in the Police Budget, in my opinion, will not commend itself to those who view with alarm the rapid increase of expenditure in the Police Department without resulting benefit to the public.

RAJA RAJESWARAN,
Raja of Ramnad.

4th May 1923.

MINUTE BY DR. P. SUBBARAYAN.

I regret that I am not able to agree to some of the recommendations of the committee. From the first it was apparent that, as the committee was composed, there was not any possibility of the majority accepting any of the proposals of the Government which were to form the basis for discussion in committee. We may say the officers were divided into two classes, viz., the police officers and Magistrates. Of these the majority of the police officers were for the *status quo* as far as the higher offices were concerned, while the Magistrates in their first replies were willing to reduce the number of Deputy Inspectors-General to two with the exception of Mr. Davis who wanted three. Of these Mr. Tyler after seeing what was written by the police officers went back on his first note and said that at least three Deputy Inspectors-General were necessary. Mr. Narayana Reddi, on the other hand, expressed no definite opinion. In the course of the discussion it was argued that the committee has no power to make a recommendation for the reduction of the higher offices as they were precluded from doing so by the Government of India Act, section 97-B. In this connexion I should like to point out that the present Minister in charge of the Public Works Department has reduced the number of Superintending Engineers and there has been no objection to this from any quarter and so I do not think that is a valid objection. Besides now the police officers have a right to become the Inspector-General and I think sufficient attraction could be provided for entry of right men into the service by having a selection grade in the grade of Superintendents. So I would recommend adopting the Government memorandum that the office of Deputy Inspectors-General be eventually abolished, but a beginning towards this end may be made by having two Deputy Inspectors-General—one in charge of the northern and the other of the southern range. With regard to the Deputy Inspector-General, Criminal Investigation Department, I am of opinion that there is no necessity for having an officer of Deputy Inspector-General rank in charge of this office and this office may be placed in the hands of a senior Superintendent of Police and I would recommend further that the Personal Assistant to this officer be of the rank of a Deputy or an Assistant Superintendent of Police. Though I think it is necessary for the State to maintain a criminal investigation department, I will recommend that political espionage of the kind that is carried on be done away with and cases of political crimes may well be entrusted to the district staff which, I think, would go to reduce the staff in this office to a great extent ; I think as long as there are Deputy Inspectors-General in charge of ranges there should be an Assistant Inspector-General in the office of the Deputy Inspector-General of the rank of Superintendent of Police, but when eventually officers of the Deputy Inspectors-General are abolished there might be an officer of Deputy Inspector-General rank to help the Inspector-General and this office may be given up. It might seem strange that a person situated as I am with no experience of police work proposes such radical alteration in the administration of police which is so much against the recommendation of the Police Commission. As Mr. Tyler says in his note, the Deputy Inspectors-General were to co-ordinate work in the districts and in this connexion they have not been able to do all they could have done, I think the system has been in vogue long enough, and as

it has not done what it was primarily intended to do, I think we may give up the system and work can be co-ordinated as much as possible by the Superintendents in the districts themselves. I agree that it is not possible to reduce the number of Superintendents unless the number of districts is reduced. Coimbatore itself is too large a charge for any part of the Nilgiris to be included in the jurisdiction of the District Superintendent of Police of Coimbatore. There is no case, as is observed by the Committee itself, for the increase of subdivisions. I agree that the Personal Assistants to the District Superintendents of Police should be abolished.

I think the cadre of Inspectors may be abolished altogether and in this I am fortified by the opinion of Mr. Ramanuja Ayyangar. He says he himself worked the scheme in Trichinopoly where in his opinion it was successful. I do not think so many intermediate officers are necessary for efficient carrying out of the administration of the police. The subdivisional officer can supervise the work and sub-inspectors after all carry on most of the investigation. I do not think a case has been made out for the retention of the Inspectors even after the change of Police Order No. 112 which allows Inspectors to undertake investigation of serious crimes. There may be three or four investigating officers in each district whose duty it will be to undertake the investigation of serious crimes when directed to do so by the Superintendent of Police of the district.

I also agree with Mr. Ramanuja Ayyangar and Mr. Moore in stating that the high standard of knowledge of English which is required in a sub-inspector at present is not necessary for efficiency, for after all a highly educated man may prove a poor detective and I think we ought to recruit matriculates or the holders of school-leaving certificates as head constables who may be put in charge of stations and from whom the future investigating officers should be entirely recruited, no direct recruitment being allowed for the grade of the new investigating officers. I am also in favour of having more stations as suggested by Mr. Ramanuja Ayyangar, but here I would adopt the plan suggested by Mr. Davis by which these new stations will be in charge of a head constable of the new grade suggested by me with two or three constables to help him. I do not think there is a necessity for stationing such an army of constables as is done now.

I do not think there is any necessity for having writer head constables in all stations and their place could be taken by a constable with a small charge allowance.

In spite of the increase that would be necessary in the number of constables because of the increase of stations, I think their number can be curtailed by the number suggested by the committee if the scheme of Mr. Davis by which stations will not have a large number of constables is adopted. It necessarily follows that if the number of constables be reduced, the police recruits school ought to be closed. I do not think there is any necessity for the change of the system of promotion of constables who are now on a graded scale and in the case of the new class of officers I suggest, i.e., the head constables and the investigating officers, I would recommend that they also be placed on a system of graded pay, promotions to grades being by efficiency and capacity of the officer concerned and not merely by service. I think armed reserves are necessary for meeting with emergency situations, but I am of opinion, as suggested by Mr. Sayers in his memorandum, that such armed reserves should be stationed at the headquarters of a district and reserves such as the one at Kamudi, Sivakasi and Tuticorin should be dispensed with. In this connexion I should like to refer to the new organization of striking forces which the Government want to create in the east and west coasts. The Government contend the Mappilla rebellion could have been nipped in the bud if there had been such a force ready at hand when the trouble began. I have no right to pass judgment on the conduct of the police in the Malabar rebellion as there has been no proper official investigation about it as yet, and as far as I can judge by the non-official opinion I do not think the conduct of the police has been a credit to the force. I would much prefer that the quelling of a rebellion should be left to the Military authorities, for after all the army have a tradition and a code of honour which we cannot expect from the police, who with all due respect are not amenable to the same kind of discipline as soldiers are accustomed to. I have heard nothing but praise about the way the soldiers conducted themselves in the Mappilla rebellion and all the trouble and discontent arose only when the prisoners were handed over to the police. I would recommend that the Government give up

the idea of organizing these striking forces and only keep the armed reserve and rely on calling in the military if trouble that arises gets beyond the control of the civil authorities.

It has been well brought out that the railway police have not only to perform the ordinary duties of police, but also that of watch and ward although the reduction in the contribution by the railway authorities was made on the distinct understanding that the duty of watch and ward would be performed by the railways themselves. In the present state of the law by which the railway authorities are able to protect themselves from all liability by their risk notes there is no doubt that the duty of watch and ward would have to be carried on by the police. I would recommend that the Government address the Government of India to increase the proportion of charges to be paid by the railway authorities. I think the special allowances granted to constables recruited in Madura town, Bellary district, Negapatam and Nagore can be discontinued as now the scale of pay for the whole force has been raised. I cannot offhand give an opinion whether the number of shorthand Inspectors at Vellore can be reduced, but I think if detection of political crimes can be entrusted to the district staff as suggested by me, shorthand sub-inspectors can be dispensed with, as the districts themselves would very likely provide themselves with one or two shorthand men on their staff to help them in the detection of political crimes. I think the uniform allowance of Re. 1 a month to constables can be substituted by an allowance of Rs. 6 a year, called dress allowance.

I think that as long as the rank of Deputy Inspector-General is retained, the Commissioner of Police, Madras City, whose duties are more in number and more responsible than that of the District Superintendents of Police should be of the rank of a Deputy Inspector-General. But if Government accept the recommendations that the officers of the rank of Deputy Inspector-General are to be given up, then I would recommend that a Superintendent in the selection grade with a presidency allowance should be the Commissioner of Police. I do not think there is any necessity for having two Superintendents of Police as Deputy Commissioners in the City; I think two Assistant Commissioners of the rank of Assistant and Deputy Superintendents will be enough to take charge of the divisions of the city and the post of the two Deputy Commissioners should be abolished; and the Commissioner should have a Personal Assistant to help him in licensing work, etc., who would be of the grade of an Assistant or Deputy Superintendent of Police. I agree with Mr. Sayers that there is no necessity for so many Sub-Inspectors of Police and I think one sub-inspector in charge of each station will be enough and if there are to be more than one, the necessity for such increase must be justified; I agree with the Government memorandum that there is no necessity for the retention of the grade of Inspectors in the city, as in the case of serious crimes the Assistant Commissioners themselves may supervise the investigation. But if Inspectors are to be retained I should adopt the recommendation of Mr. Sayers by which one Inspector in each range may be reduced. I do not think there could be any reduction in the number of horses, as in the case of processions, etc., mounted police are very useful. I would do away with armed reserve altogether in the city or at least reduce the number, because it is quite possible to run into Madras armed reserves from the neighbouring districts like Chingleput. I do not think there is any necessity for an intelligence staff in the city and I agree with Mr. Sayers that this can be dispensed with.

I do not agree with paragraph 11 of the report, as I think the non-official member Dr. Natesan representing the city has the same opinion as I find members whose experience is entirely confined to the Madras City have. I have seen this tendency exhibit itself on every committee I have sat and Dr. Natesan's is rather an exaggerated one of the opinion of the city members. These people seem to forget that most of the money that helps to carry on the administration of the province comes from the rural population, as it is bound to in an agricultural country like India, and it is but incumbent on the State to do what they can to improve the lot of the poor villagers. When such is the case, I do not think one ought to be carried away by the opinion of the city member, although I admit that the city ought to have its own quota. So I do not think there would be any harm in reducing the staff in the city as I have suggested and I do not think the reduction I have recommended would in any way imperil the efficiency of the City Police.

To sum up, my recommendations are—

(1) That the offices of the Deputy Inspectors-General, could eventually be abolished, but should at least be reduced to two for the present. If there are Range Deputy Inspectors-General, then there should be an Assistant Inspector-General to help the Inspector-General, although his place could be taken by an officer of the rank of Deputy Inspector General when Range Deputy Inspectors-General are abolished.

(2) That there can be no reduction in the number of Superintendents except as a result of reduction in the number of districts.

(3) That there is no case for a large increase of subdivisions although the scheme suggested by me of having only investigating officers and head constables may lead to the increase of a few divisions.

(4) That there is no need for the retention of Personal Assistants to the Superintendents of Police.

(5) That the rank of Inspectors be abolished altogether and their places be taken by three or four investigating officers in each district, whose duty it will be to undertake the investigation of serious crimes when directed to do so by the Superintendents of Police and co-ordinate work in the several stations.

(6) That the rank of Sub-inspectors should be abolished and stations be placed in charge of head constables newly recruited with a pay of Rs. 40 as the minimum and the new rank of investigation officers should be obtained by promotion from the rank of these head constables.

(7) The number of stations should be increased, but each station in the distant places should be in charge of a head constable of the rank suggested above with two or three constables who would send for assistance, if necessary, to a large station at taluk headquarters.

(8) That in all stations the place of writer head constables should be taken up by constables who would receive a small allowance.

(9) That the strength of the constables of all stations should be examined with a view to the eventual reduction of their number by about 2,000.

(10) That until these have been absorbed in the force, the Police Recruit schools ought to be closed.

(11) That there should be no change in the promotion of constables and the grade system should also prevail in the new class of head constables and investigating officers.

(12) That the Criminal Investigation Department should be placed in charge of a senior Superintendent of Police with an officer of the rank of a Deputy Superintendent of Police as his Personal Assistant, and a certain reduction in the staff ought to be possible by placing all detection of political crimes in the hands of the district staff.

(13) That although as long as the Range Deputy Inspectors-General are retained the Commissioner should be of the rank of Deputy Inspector-General, as soon as they are abolished the Commissioner may be of the rank of a senior District Superintendent of Police with a presidency allowance; the Deputy Commissioners should be replaced by Assistant Commissioners of the rank of a Deputy or Assistant Superintendent of Police and the Commissioner should have a Personal Assistant of the rank of a Deputy or Assistant Superintendent of Police who would be in charge of licensing work, etc., at present performed by the Assistant Commissioner.

(14) That the cadre of inspectors in the city could be abolished altogether, if not at least reduced by one in each range, and that one sub-inspector in charge of each station should be enough and if there are to be more than one the necessity for such increase ought to be proved. That the intelligence staff and the reserves in the city ought to be abolished if not at least reduced.

(15) The armed reserves are necessary in every district, but they may be stationed at headquarters and such reserves as at Kamudi, Sivakasi and Tuticorin ought to be abolished. There is no necessity for the organization of a striking force and if there should be trouble which would attain the proportion of a rebellion which cannot be quelled by civil authorities recourse to military help is preferable to that of quelling it by a striking force.

(16) That the question of contribution towards the railway police by the railway authorities should be raised with the Government of India.

Of the questions referred by the Retrenchment Committee I would suggest that the special allowance given to constables recruited in particular areas be discontinued, that dress allowance should be reduced to one of Rs. 6 per year, enquiries should be made with regard to the postal escorts or rather if the treasury should come under the Government of India, the Government of India must be asked to bear the costs of these escorts, and if investigation of political crimes are to be handed over to the district staff the shorthand sub-inspectors at Vellore can be dispensed with. I think a police officer should be placed on special duty to carry on the various investigations suggested. I think one officer will be enough as he will be able to co-ordinate the work better.

P. SUBBARAYAN.

**V.—REPORT OF THE MEDICAL AND PUBLIC HEALTH
RETRENCHMENT COMMITTEE.**

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THE REPORT OF THE MEDICAL AND PUBLIC HEALTH RETRENCHMENT COMMITTEE.

CHAPTER I.—INTRODUCTORY.

With a view to effecting an appreciable reduction in the expenditure of Medical and Public Health Departments, the Government in their Order No. 250, P.H., dated 9th February 1923, ordered the constitution of a Committee to examine the present system of administration and to devise practical measures, whether involving changes in policy or in procedure, that would reduce the expenditure on these departments. So far as changes of policy were concerned, the Committee were allowed to discuss alternative schemes, to indicate economies which might be effected if particular policies were either adopted, abandoned or modified and to suggest measures leading to increased efficiency without extra expense. They were not however to deal with the scales of pay or the strength of the cadre of the Indian Medical Service.

2. The Committee consisted of the following members :—

- (1) Mr. A. Y. G. Campbell, C.I.E., C.B.E., I.C.S. (*Chairman*).
- (2) Lieut.-Col. T. H. Symons, O.B.E., I.M.S.
- (3) Major A. J. H. Russell, I.M.S.
- (4) M.R.Ry. Rao Bahadur T. M. K. Nedungadi Avargal, L.M.S.
- (5) Mr. H. A. Watson, I.C.S.
- (6) M.R.Ry. Diwan Bahadur Sir T. Desika Achariyar Avargal, *Kt.*, M.L.O.
- (7) „ Rao Bahadur P. C. N. Ethirajulu Nayudu Garu, M.L.O.
- (8) Mr. B. Rama Rau, I.C.S. (*Secretary*).

We commenced our work on the 27th of February and have held altogether eight meetings. We have met again to-day to adopt our report. Except on the question of the appointment of honorary physicians and surgeons, we have not examined any witnesses, and our recommendations are based on the information available in the Secretariat and in the Surgeon-General's office and such other information as we have been able to gather within the limited time at our disposal.

4. The other members of the Committee desire to place on record their high appreciation of the valuable assistance which they have received from Mr. Rama Rau, the Secretary, and of the able and efficient manner in which he has discharged his duties.

5. We submit our report under the following heads :—

- (I) The Public Health Department.
- (II) The Medical Department.
- (III) Allowances.

CHAPTER II.—THE PUBLIC HEALTH DEPARTMENT.

6. The following statement shows the growth of expenditure in this department during the last five years :—

	1918-19.	1919-20.	1920-21.	1921-22.	1922-23, revised estimate.	1923-24, budget estimate.
	RS.	RS.	RS.	RS.	RS.	RS.
1. Establishment	2,44,211	2,71,493	3,17,199	3,70,793	3,89,600	6,12,400
2. Town-planning	6,578	259	457	85,488	29,800	33,756
3. Health officers	7,255	9,371	8,196	12,277	30,000	39,015
4. Epidemics	2,05,341	2,03,590	3,28,279	3,02,027	2,80,600	1,10,800
5. King Institute	86,565	1,29,316	1,26,521	1,83,815	2,35,900	2,61,400
6. Pasteur Institute	30,475	38,918	42,151	48,670	43,100	40,900
Total ..	5,80,425	6,53,047	8,22,803	9,53,050	10,09,000	10,97,771

7. These figures do not include grants for major water-supply and drainage schemes, which are invariably given for specific works. Since these grants are of a non-recurring character they can be curtailed during a period of financial stringency, and we have therefore not taken them into consideration.

8. *Establishment*.—The staffs maintained by the Government and local bodies for the prevention of disease during 1922-23 consisted of the following officers:—

(1) For direction and control of sanitary work in general, the Government maintained, in addition to the Director of Public Health, a staff of five Assistant Directors. Three of these were in charge of ranges and two were stationed in Madras, one of them being in charge of vital statistics and the other in charge of fairs and festivals.

(2) Several boards maintained at their own expense a few sanitary inspectors for general sanitation work, and some of them also employed assistant surgeons as sanitary assistants to the District Medical and Sanitary Officer.

(3) For dealing with epidemics of cholera, the Government maintained eight cholera parties, each consisting of an assistant surgeon and ten trained sanitary inspectors, whose headquarters were in Madras. They were sometimes employed on anti-malarial and plague work.

(4) For vaccination work, local bodies maintained a large staff of vaccinators and the Government employed 106 Deputy Inspectors of Vaccination, who were controlled by the Assistant Directors of Public Health.

(5) In districts exposed to plague-infection a staff of plague inspectors was employed by the Collector at the expense partly of provincial and partly of local funds, but the staff employed has always been entirely under the control of the Collector, who is responsible under the Plague Standing Orders for all measures connected with plague.

9. The Government have already recognised the wastage involved in the employment of a different staff for dealing with each disease, especially as the periods of maximum incidence of cholera, smallpox, plague or malaria do not often coincide. In their Order No. 817, P.H., dated 10th June 1922, they have already directed the amalgamation of the cadre of Deputy Inspectors of Vaccination (to be hereafter designated health inspectors) with the staff of inspectors attached to cholera parties. They have also in their Order No. 1096, L. & M., dated 21st June 1922, directed local bodies to employ a district health officer whose pay is to be met from a provincial grant and have provided each district at the expense of the Government with a staff of district health inspectors, which is to consist partly of Deputy Inspectors of Vaccination and partly of sanitary inspectors hitherto attached to cholera parties. We understand that the main duties of the district health staff as reorganized by the Government in their orders referred to above will be

(a) the investigation and control of all outbreaks of communicable disease in rural areas and the carrying out of measures necessary to suppress epidemics of cholera, smallpox, plague, malaria, etc.;

(b) the supervision of all vaccination work;

(c) the supervision and improvement of the registration of vital statistics, which are to be made more detailed and much more accurate than at present;

(d) the drawing up of plans and estimates for simple sanitary projects and taking steps to remedy defects in village drainage, water-supplies, etc.;

(e) propaganda work; and

(f) supervision of sanitary arrangements in connection with fairs and festivals.

10. Although plague has not been specifically excluded from the duties of the district health staff, we observe that it is not the intention of the Government to relieve Collectors of their responsibility for plague measures and that a provision of nearly a lakh of rupees has been made by the Government in the budget for 1923-24 for "expenditure in connection with bubonic plague". We understand that the Government did not propose to abolish the plague staff now maintained, in view of the nature of the work involved in plague-preventive measures. Epidemics of plague require very prompt action, and very often the assistance of the revenue authorities and of the police is necessary for enforcing preventive measures, and the Government considered that presidents of district boards, who were often very busy

professional men and sometimes Members of the Legislative Council, might find it difficult to devote the time and attention necessary adequately to deal with such epidemics. We recognize the force of these objections to the transfer of plague work to a non-official agency, but we consider that the difficulties referred to above can be avoided if the Collector is associated with the health work in the district and the preventive staff is reorganized on a slightly different basis. We desire to point out that even now in public health matters the boards have necessarily to rely very largely on the reports and co-operation of the revenue officers and delay on the part of village officers in reporting epidemics, not only of plague but also of cholera, smallpox and other diseases, very often makes it impossible for the taluk board or the district board to adopt any effective preventive measures. Moreover, vital statistics upon which the whole policy of the public health administration must be based are recorded by village officers, who are under the control of the Collector. We understand that presidents of boards have sometimes asked for greater control in these matters over revenue subordinates, but we recognize that it is quite impracticable to comply with such requests which would involve placing the revenue subordinates under two independent masters. We consider that the objections to the transfer of the executive control of plague measures to the district board presidents apply, though perhaps not to the same degree, to all preventive measures connected with epidemics, and we therefore recommend that the entire district health staff should work under a district health board consisting of the Collector as chairman, and the District Medical Officer, the President of the District Board, the presidents of all taluk boards and the chairmen of all municipalities in the district as members. The district health officer should be the Secretary of the Health Board and its executive officer, but he should not in our opinion be a member of the board. The vaccinators may continue to be paid from local funds and to be under the control of local boards, but their work will, as hitherto, be supervised by the district health inspectors. We may point out that our proposal makes it possible to employ the district health staff in municipal areas and should ensure the adoption of a uniform policy throughout the district including the municipalities. One of the defects of the scheme sanctioned by the Government is that, although an epidemic may be raging within a municipality and is likely to spread to the surrounding parts of the district, and the municipal authorities may fail to take or be incapable of taking adequate measures to deal with it, the district health staff which is to be under the control of the district board cannot properly be employed there unless the services of certain members of the staff are placed at the disposal of the municipal council on the usual terms, for the president of the district board has no jurisdiction over municipal areas. If the district health staff can be placed under a board which has the Collector as the chairman and which contains representatives of municipalities, these difficulties will be overcome. We understand that in more than one case, where district health staffs have been in existence during the past year, municipalities have not only asked for the use of the district health staffs but have also asked to be admitted to the district health scheme.

11. We wish to emphasize that our proposal does not deprive the presidents of district boards of any powers or privileges that they have enjoyed hitherto. In the first place, the Collector and the District Medical Officer will be the only two official members of the board, and the representatives of the local boards and municipalities will still be in a position to lay down the *policy* as regards public health in the district. In the second place, the main work with which the district health staff is to be entrusted has hitherto been done through agencies *entirely under Government control*. The chief work of the district health staff, if reorganized as suggested by us, will be inspection of vaccination work, epidemics of cholera, plague preventive measures and propaganda work. Inspection of vaccination work has hitherto been done by deputy inspectors of vaccination (now designated health inspectors), who are all Government servants under the direct control of the Assistant Directors of Public Health and the Director of Public Health, though presidents of District Boards have been given certain powers as regards transfer of these officers within their districts and punishment. Cholera epidemics have in the past been dealt with by the Provincial cholera parties, which also worked directly under the Director of Public Health. The Collector has been responsible for all plague preventive measures, and though he has employed the establishment necessary for the purpose partly at the expense of local funds, he has had absolute control over the staff under the Plague Standing Orders.

Propaganda work has hitherto been done by a special staff of health lecturers, also under the control of the Director of Public Health. The cost of all this staff will, under our proposals, be met as hitherto by the Government.

12. We consider that the services of the revenue staff are essential for purposes of public health unless a far larger public health staff is to be employed, and that the best arrangement in the circumstances is to place the *executive* control over the public health staff in the hands of the Collector as Chairman of the Public Health Board for his district. We therefore strongly recommend that the scheme outlined above be given effect to not only as a measure of economy but also in the interests of efficiency. Without a reference to the Collectors who employ plague staffs, we are not in a position to say what reduction can be made in the budget allotment if the scheme suggested by us is given effect to. But we estimate that the savings will not be less than Rs. 50,000 per annum.

13. We have so far dealt with the public health preventive staff in general and have indicated the lines on which it might be reorganized so as to secure economy as well as efficiency. We shall now treat of the individual classes of officers who constitute the preventive staff.

14. *Assistant Directors of Public Health.*—Up to 1913 there was only one Assistant Director of Public Health in this Presidency (then designated Deputy Sanitary Commissioner). He was also the Inspector of Vaccination. At that time none of the districts had any health officers, but some of the district boards employed at their own expense sanitary assistants to the District Medical and Sanitary Officer. These assistants, however, were ordinarily junior men without special training, and their duties were somewhat ill-defined and perfunctorily discharged. In 1913 the Government considered that the superior sanitary establishment was quite inadequate and therefore obtained the sanction of the Secretary of State to the creation of two additional appointments of Deputy Sanitary Commissioners, and the Presidency was divided into three ranges, one officer being placed in charge of each. One of these two posts was filled in December 1913, but the other remained vacant until 1918, as no suitable candidate was available during the War.

15. In 1920 the Government accepted a resolution in the Legislative Council recommending the appointment of a special officer to investigate into the sanitary condition of pilgrim centres. A temporary appointment was therefore created for the purpose for a period of one year and this work was assigned to one of the then existing Deputy Sanitary Commissioners. Meanwhile, the Surgeon-General again raised the question of increasing the number of superior officers in the Sanitary department as he found that the three officers then in service were not able to traverse the whole Presidency and devote adequate attention to vaccination work in addition to public health work in general. The Government agreed that if the various problems connected with public health were to be satisfactorily dealt with, it would be necessary to increase the expert staff as recommended by the Surgeon-General, and three more appointments were accordingly created with the sanction of the Secretary of State.

16. There are thus at the present time six sanctioned appointments, but the Government have decided to keep the sixth place vacant. Of the remaining five as we have already observed, three are in charge of territorial ranges, while the other two are attached to the Director's office, one of them being in charge of vital statistics and the other of fairs and festivals. We understand that the main work done by the territorial Assistant Directors of Public Health is (1) inspection of vaccination, (2) inspection of municipalities, (3) festival arrangements and (4) epidemics.

17. It will be observed that the major portion of this work will hereafter be transferred to the District Health Staff according to the scheme we have referred to in paragraphs 9 to 12, and we are informed that it is proposed to continue these Assistant Directors in their ranges only up to 1st October 1923, so that they might be able to guide, advise and instruct district health officers in the methods of administration and in the co-ordination of all branches of public health work. From 1st October 1923 these Assistant Directors are to cease to be territorial and are to be in charge of a branch of public health administration with their headquarters in

Madras. The distribution of work among the five Assistant Directors who are to be attached to the Director's office after October is, we understand, to be as follows:—

- (1) Assistant Director of Public Health (fairs and festivals and epidemiology of infectious diseases).
- (2) Assistant Director of Public Health (vital statistics and publicity).
- (3) Assistant Director of Public Health (Vaccination).
- (4) Assistant Director of Public Health (local public health administration and industrial hygiene).
- (5) Assistant Director of Public Health (school hygiene and maternity and child welfare, including infant mortality work).

18. We recognize the importance of guiding the district health officers in the initial stages of the introduction of the district health scheme and we agree that the territorial Assistant Directors of Public Health should continue in their present ranges for at least six months after the introduction of the scheme. But we do not see sufficient justification at present for the maintenance of a staff of five Assistant Directors of Public Health to be attached to the Director's office, each in charge of a branch of the administration as indicated in the proposals outlined above. We presume that all routine inspection of vaccination will hereafter be done by district health officers and that the attention of the superior staff will be directed to the solution of the larger problems connected with epidemics of smallpox, and we do not think there is adequate justification for the employment of a whole-time Assistant Director to deal with vaccination and the epidemiology of smallpox. Nor do we consider that the superior staff should interfere with the detailed arrangements connected with the minor fairs and festivals. As we have already noted, an Assistant Director of Public Health was on special duty for over eighteen months to investigate the sanitary conditions of pilgrim centres. The Special Officer has submitted to the Government an exhaustive report on pilgrim centres dealing with all questions relating to sanitation, food supply, accommodation for pilgrims, communications, lighting arrangements, medical aid, police arrangements, management and finance, and has indicated in detail the arrangements to be made during large festivals and the precautions to be taken against outbreaks of epidemic diseases. With these detailed instructions before them, the district health staff ought, in our opinion, to be in a position to make all arrangements connected with fairs and festivals, and we do not consider that it should be part of the duty of any Assistant Director to direct or control these arrangements, except in the case of festivals of provincial importance such as the *duodecennial* festivals at Rajahmundry (Pushkaram), Bezwada (Pushkaram) and Kumbakonam (Mahamakham). We consider that one Assistant Director of Public Health should be entrusted with the work connected with the larger festivals and the epidemiology of infectious diseases. A second Assistant Director may, as proposed, be in charge of vital statistics and propaganda work. A third Assistant Director should be able to deal with vaccination and the miscellaneous work which is to be allotted to the fourth and fifth Assistant Directors of Public Health according to the proposal outlined in the preceding paragraph, especially as we understand that medical inspection of schools is to continue to be under the Education Department. We do not consider that it is possible for a single Assistant Director of Public Health adequately to inspect over 80 municipalities nor are we convinced that such inspections by Assistant Directors as have been made hitherto have resulted in any considerable improvement of sanitation in urban areas. Moreover, if the District Health Board is to be reorganized as suggested by us so as to include representatives of municipalities there is no reason why the District Health Officer should not also attend to urban sanitation in those towns which have got no health officer of their own. We do not therefore think that a separate Assistant Director of Public Health should be maintained for local public health administration and industrial hygiene as proposed.

19. The redistribution of work among the Assistant Directors of Public Health suggested by us in the preceding paragraph will involve the reduction of the number of these officers from five to three, and we recommend that two more of these appointments be abolished with effect from 1st October 1923; but if school hygiene and medical inspection of schools are transferred to the Public Health department, the matter may have to be reconsidered. We recognise however that in this Presidency preventive work on a systematic and scientific basis has only just begun and

that the epidemiology of diseases will have to be investigated in detail before any further advance can be made. We therefore strongly recommend to the Government that they should not hesitate to sanction the employment of one or more additional bacteriological units to be attached to the King Institute at Guindy as and when necessary, to facilitate such investigations. We understand that the bacteriological unit already sanctioned has been of the greatest value not only to the Public Health Department but also to the Jail and Forest departments.

20. The abolition of two appointments of Assistant Directors of Public Health will result in a saving of Rs. 36,000 approximately.

21. *District Health Officers.*—Health officers are now employed in every district except the Nilgiris and in the municipalities of Ootacamund, Trichinopoly, Madura, Salem, Negapatam, Rajahmundry, Cocanada, Tuticorin, Calicut and Coimbatore. The pay of municipal health officers is personal while that of district health officers is regulated by G.O. No. 533, P.H., dated 18th May 1921, according to which every first-class health officer should get the pay of civil assistant surgeons (that is, Rs. 200–15–350–20–450) and a local allowance on the scale given below :—

Service.	Per mensem.
	RS.
1 to 5 years	100
6 to 10 years	150
11 to 15 years	200
16 to 20 years	250
Over 20 years	300

The second-class health officers, who are usually sub-assistant surgeons specially trained for public health work, are given the grade pay of a sub-assistant surgeon (that is, Rs. 75–5–175) with an allowance of half that sanctioned for first-class health officers. In addition to these allowances health officers in municipalities get, according to the Government Order referred to, a conveyance allowance of Rs. 50 a month.

22. These scales were fixed when it was very difficult to get any medical officers for the Public Health Department, since a large number of medical officers were on military duty. Many of these latter have now returned to civil employment and have displaced a large number of temporary assistant surgeons, and there is consequently no dearth of candidates now. In fact it has been found difficult in some cases to induce local bodies to adopt the scale sanctioned by the Government. The prospects of the health service have also been improved considerably by the decision of the Government to create 23 appointments of district health officers to be paid from provincial funds. It will be difficult to justify the payment of an allowance which in the case of an officer of more than 20 years service will amount to two-thirds of the pay of the appointment, and we consider that these allowances should be reduced substantially, especially as it is not difficult now to obtain the services of competent health officers. We understand that the object of the Government in placing the health officers on the cadre of civil assistant surgeons was to facilitate the transfer of health officers who are not fit for sanitary work to the Medical Department. We do not see the necessity for the provision of any permanent appointments for health officers who have been found incompetent for sanitary work, and we consider that the cadre of health officers should not be amalgamated with that of civil assistant surgeons. We recommend that a separate consolidated scale of pay, as shown below, should be sanctioned for all first and second class health officers and that municipal and district health officers should be included in the same cadre.

First-class health officers Rs. 250—20—450—25—600 (efficiency bar at Rs. 450).

Second-class health officers Rs. 100—10—300 (efficiency bar at Rs. 200).

We further recommend that the conveyance allowances now paid to municipal health officers be abolished. Similar allowances are not paid to officers of other departments in municipalities, and we do not see sufficient justification for the retention of this allowance.

23. If the allowances are abolished and the scales of pay suggested by us are adopted there will be a saving of Rs. 40,000 annually.

24. *District health inspectors.*—There are now 205 district health inspectors of whom 174 are to be on the scale of Rs. 60—5—120 and 31 (that is, 15 per cent of the total strength) are to be in the selection grade on Rs. 125—5—150. We observe that these officers undergo a training of only nine months at the most after the Secondary School-Leaving Certificate course before they are qualified for appointment as health inspectors, whilst in the Medical Department a sub-assistant surgeon who obtains a diploma after a fairly difficult course of at least four years in a medical school is entitled to a pay of only Rs. 75—5—175 with a selection grade on Rs. 200. We consider that the present scale for health inspectors is unnecessarily extravagant, especially as the maximum on the ordinary scale is reached after a service of only 12 years. We recommend that the following scale be adopted for this class of officers :—

Rupees 60—3—120 with an efficiency bar at Rs. 90.

Selection grade on Rs. 125—5—140 to be limited to 5 per cent of the cadre.

No officer who has not been on Rs. 120 for at least one year should, in our opinion, be promoted to the selection grade. Our proposals regarding the scales of pay for district health inspectors will result in an average saving of Rs. 24,600 annually.

25. *Public health laboratories.*—In connexion with our proposal for the reorganization of the public health preventive staff, we have already dealt with the next budget minor head, viz., 'Expenses in connexion with epidemic diseases' and we have very little to say regarding the expenditure under the remaining minor heads, viz., the Bacteriological laboratories and the Pasteur Institute.

26. *King Institute.*—We observe that the expenditure of the King Institute has nearly trebled during the last five years. Originally built for the preparation of vaccine lymph in 1901, this Institute now combines the functions of—

- (1) a vaccine lymph manufacturing depot for the Presidency,
- (2) a bacteriological laboratory for the manufacture of bacterial vaccines,
- (3) a laboratory for the examination of clinical material for the Madras hospitals and the Presidency in general, and
- (4) the Presidency Public Health laboratory.

We understand that the work of this Institute has more than doubled during the last ten years and that in recent years complicated and prolonged tests have been added to the ordinary routine laboratory work of the earlier years. This has meant a very considerable amount of additional work for the staff. In order to cope with the increased work the Director of the Institute drew up in 1922 a scheme of reorganization involving an additional expenditure of nearly Rs. 40,000 a year. The scheme was subjected to a very detailed scrutiny both by the Finance Committee and the Government and was finally sanctioned by Government so recently as November 1922, in spite of the great financial stringency existing at the time. We understand that the scheme has not yet entirely been given effect to, and we do not feel justified in making any recommendations for the reduction of expenditure at this stage, especially as the Government only five months ago considered that the extra expenditure was necessary. We have therefore no general recommendations to make as regards this institute. The allowances drawn by the individual medical officers at the institute will be dealt with subsequently.

27. *Pasteur Institute.*—This is a private institution managed by a society registered under the Societies Registration Act, but the pay of the Director and his assistant is paid from provincial funds and the Government also pay a fixed contribution of Rs. 7,000 per year. We do not recommend any reduction in the grant, since we understand that the financial position of the institution is not altogether satisfactory.

CHAPTER III.—THE MEDICAL DEPARTMENT.

28. In the list * given below is shown the number of appointments held by the different classes of officers who constitute the Medical Department :—

Grade of officers.	Number of appointments reserved.	Number of officers now employed.
(1) Indian Medical Service	52	45
(2) Civil surgeons (non-Indian Medical Service) ...	8	8
(3) Civil and military assistant surgeons holding appointments reserved for the Indian Medical Service or for civil surgeons	...	15
(4) Military assistant surgeons	23	27
(5) Civil assistant surgeons	236	234 (+ 3 local fund civil assistant surgeons).
(6) Sub-assistant surgeons	821	784 (+ 44 local fund sub-assistant surgeons).

Of the civil surgeoncies two are reserved for military assistant surgeons, and of the civil assistant surgeons 156 are in Government employ, 48 in local fund employ, and 33 under municipalities. Similarly, there are 387 sub-assistant surgeons holding Government appointments, 376 in local fund employ and 69 under municipalities.

29. The Government maintain practically all the Presidency hospitals, 24 hospitals at the headquarters of districts and 4 women and children's hospitals (Calicut, Mangalore, Salem and Vizagapatam). Eighty-seven hospitals in charge of assistant surgeons and 74 in charge of sub-assistant surgeons are under local board or municipal management. There are also 341 dispensaries in charge of sub-assistant surgeons maintained by local bodies. Almost all the medical officers employed by local bodies are Government servants lent to local bodies, who pay an annual contribution equivalent to the average salary of the class of officer employed. At present the Government pay a contribution of a certain percentage of the salaries of medical officers employed by local bodies in return for services rendered to the Government, such as post-mortem examinations, attendance on Government officers, etc. This percentage has been fixed at 5 and 10 in the case of sub-assistant surgeons employed by municipalities and local boards respectively, and $17\frac{1}{2}$ and $22\frac{1}{2}$ in the case of civil assistant surgeons. The Government also pay half the cost of all local fund and municipal medical institutions opened after 9th March 1915. These grants amount in all to 1.80 lakhs.

30. We shall deal with the medical establishment first. The cost of the medical establishment has gone up from Rs. 4.43 lakhs in 1917-18 to Rs. 9.58 lakhs in 1922-23 as shown below :—

	RS.		RS.
1917-18	4,43,205	Revised estimate—	
1918-19	4,62,845	1922-23	9,58,200
1919-20	5,91,663	Budget estimate—	
1920-21	7,12,971	1923-24	8,87,300
1921-22	11,29,059		

This increase is partly due to the larger number of officers now employed under Government on account of the taking over of the headquarter hospitals, but is mainly due to the revision of salaries during this period. The salary of Indian Medical Service officers was revised in December 1918 and again in January 1920, while that of civil assistant surgeons was revised with effect from 1st April 1920. The pay of sub-assistant surgeons was raised twice during this period, once in March 1918 and again in March 1921. A statement showing the increases of pay due to these revisions is given in Appendix B. Under devolution rule 12, framed under the Government of India Act, the Local Government is bound to employ "such number of Indian Medical Service officers in such appointments and on such terms and

* The figures are taken from the Quarterly Civil Medical List corrected up to the 31st December 1922.

conditions as may be prescribed by the Secretary of State in Council." We understand that the Government have already submitted their recommendation to the Government of India as regards the number of appointments they are prepared to reserve for the Indian Medical Service, and we have been specifically asked not to deal with the scales of pay or strength of the cadre of the Indian Medical Service. The allowances drawn by individual officers of this service will, however, be dealt with subsequently.

31. As regards the pay of the civil surgeons we have no recommendations to make. These officers hold appointments similar to those reserved for the Indian Medical Service officers and we do not consider that the sanctioned scale is too high. Nor do we recommend any reduction in the scale of pay sanctioned for assistant surgeons and sub-assistant surgeons. We wish it to be clearly understood that all our recommendations regarding the abolition or reduction of allowances drawn by these officers are subject to the condition that the sanctioned time-scales of pay are not altered.

32. *The Surgeon-General's office.*—We understand that Mr. Schmidt, the Director of Office Systems, has made a very detailed inspection of the Surgeon-General's office and has made definite recommendations for the reorganization of the office and for the reduction of the establishment. Mr. Schmidt's scheme has already been given effect to, and we are informed that the question of reducing the establishment is under the consideration of the Government. We do not therefore propose to make any recommendations as regards the office establishment of the Surgeon-General. But we consider that the appointment of a temporary assistant surgeon for statistical work at the Surgeon-General's office is unnecessary. The Personal Assistant to the Surgeon-General is now a whole-time officer, and it should be possible to get the work done by a clerk under the supervision of the Personal Assistant. We therefore recommend that this appointment be abolished with effect from July 1923.

33. *Appointments held by the Indian Medical Service.*—The following is a list of the appointments and collateral charges normally held by Indian Medical Service officers doing professorial work :—

Appointment.	Collateral charges.	Allowances per mensem.	Enhancement of pay.
		RS.	RS.
1. Chemical Examiner ...	Professorship of Chemistry ...	Nil.	250
2. First Surgeon, General Hospital.	Professor of Surgery, Superintendent, General Hospital.	150	250
3. Second Surgeon, General Hospital.	Port and Marine duties, Professor of Medical Jurisprudence.	200	...
4. Third Surgeon, General Hospital.	Professor of Biology ...	200	...
5. Surgeon, Second District.	First Physician, General Hospital. Professor of Medicine, Principal, Medical College	150	250
6. Surgeon, Third District.	Second Physician, General Hospital, Professor of Physiology.	...	250
7. Surgeon, Fourth District.	Superintendent, Rayapetta Hospital, Professor of Hygiene and Bacteriology.	200 (a) 200 for three months (b)	...
8. Third Physician, General Hospital.	Professor of Pathology ...	200 (c)	...
9. Fourth Physician, General Hospital.	Professor of Materia Medica ...	200	...
10. Superintendent, Maternity Hospital.	Professor of Midwifery ...	...	250
11. Superintendent, Ophthalmic Hospital.	Professor of Ophthalmology, Medical Officer, Civil Orphan Asylum.	...	250
12. Superintendent, Lunatic Asylum.	Lecturer in Mental Diseases ...	...	250

(a) for clinical teaching of Rayapuram Medical School students.
(b) for post-graduate training of sub-assistant surgeons.
(c) for minor professorship.

Appointment.	Collateral charges.	Allowances per mensem.	Enhancement of pay.
13. Professor of Anatomy ...	(This Professorship is now filled up by civil assistant surgeons who get a consolidated pay of Rs. 800—100 triennial—1,300 a month).	RS. ...	RS. ...
14. Director of the King Institute.	.....	280	250

Of these fourteen appointments six are classed as major professorships, which are paid according to an enhanced scale (i.e., the grade scale of the Indian Medical Service plus an allowance of Rs. 250 a month), and five are classed as minor professorships which carry an allowance of Rs. 200 per month. It will be observed that all the professorships except the Professorship of Anatomy are held as collateral charges by the surgeons and physicians attached to the Presidency hospitals or by specialists like the Chemical Examiner, the Superintendent of the Government Ophthalmic Hospital and the Superintendent of the Lunatic Asylum. We understand that although the minor professorships carry an allowance of only Rs. 200, the holders of some of these appointments, such as the Professor of Pathology and the Professor of Hygiene and Bacteriology, have to spend more time on their teaching work than some, at any rate, of the major professors. We do not see any justification for any differential treatment as regards the allowances paid for professorial work, and we consider that it should be definitely recognized that these are professorial appointments. We recommend that there should be 14 professorial appointments on the enhanced scale of pay (separate scales of pay being fixed for Indian Medical Service and non-I.M.S. officers), and that the work which is now allotted to these fourteen officers (including that of the Port and Marine Surgeon) should be redistributed in such a way that the holder of any of these appointments does not normally have more than a full day's work. We consider that when the enhanced scale of pay is introduced, all the allowances now drawn by these officers should be abolished except the following, which may be retained on account of the added administrative responsibility involved:—

(1) Director of King Institute	...	RS.
(2) Principal of the Medical College	...	200
(3) Superintendent, General Hospital	...	150
	...	150

34. The main work of the District Surgeons in Madras is (a) postmortem examinations, (b) grant of certificates to Government servants and others and (c) attendance on Government officers. For this work they are given the assistance of an assistant surgeon and, in the case of Rayapuram, also a sub-assistant surgeon. We consider that the work of the 2nd and 3rd districts relating to the first two items should be transferred to the 1st and 4th districts and that a civil assistant surgeon should be attached to the Royapetta hospital to do the work of the 2nd, 3rd and 4th districts and the civil orphan asylum. He may be given a motor-cycle allowance of Rs. 25 a month. As regards attendance on Government officers, the Surgeon-General should be requested to divide the city into convenient divisions and distribute the work among such of the officers as have not a full day's work. These proposals will involve the abolition of the two civil assistant surgeons who are now serving in the 2nd and 3rd districts and of the sub-assistant surgeon who is serving in the 1st district, and the creation of a new appointment of assistant surgeon to be attached to the Royapetta hospital. This latter officer may also be given work at the hospital, and the possibility of reducing the staff of the hospital by one officer may be considered in consultation with the Surgeon-General.

35. The redistribution of work suggested by us will not result in any appreciable saving in the total pay and allowances now paid to officers holding Indian Medical Service appointments, but the officers entitled to free quarters will hereafter be made to pay house rent, and it will also no longer be necessary to pay to the Port and Marine Surgeon the fees prescribed in paragraph 507 of the Civil Medical Code, which amounted to nearly Rs. 5,000 in 1922. According to the Civil Medical Code, which Health Officer is granted an additional allowance of one-thirtieth of a month's pay for each Sunday or 'close' holiday or part of it, on which he is unavoidably required

to perform inspection work in connection with plague, sleeping sickness and other diseases and also for all unavoidable medical inspections of ships on such days. We understand that this provision, which was obviously intended to be applied to exceptional cases, has become the source of a regular monthly income for the Port and Marine Surgeon. We learn that during the year 1922 the Port and Marine Surgeon performed his inspection work only on Sundays and 'close' holidays and that he attended the port on almost every Sunday or other holiday. We do not see any justification for the payment of these fees, which, as we have observed, amounted to Rs. 5,000 during the last year. We recommend that this practice should be immediately stopped and that the work now done by the Port and Marine Surgeon should be definitely assigned to one of the fourteen professorships referred to above.

36. These proposals for the redistribution of work among the officers holding Indian Medical Service appointments will result in a saving of about Rs. 15,000 annually.

37. *Honorary physicians and surgeons.*—We have been specifically requested by the General Retrenchment Committee to examine the question of appointing honorary physicians and surgeons in the hospitals in this Presidency. This question was first raised by Dr. T. M. Nair in an article in the "Antiseptic" in February 1910. Medical opinion was sharply divided on the question and objections were raised to the proposal on the ground (1) that there were very few qualified medical practitioners who would care to accept such appointments, (2) that friction would result between them and the assistant surgeons and sub-assistant surgeons in the hospitals. As an alternative it was suggested that the system of appointing consultants who could be called in when necessary by the regular staff or if desired by the patients might be tried. The Government, after a careful consideration of the alternative suggested, decided to attach an honorary surgeon or physician to each of the hospitals at Royapetta and Rayapuram to begin with. Rules were framed to regulate to work of these officers, who were assigned specific duties in their respective hospitals and were made responsible for the care and treatment of the patients in their charge, but the District Surgeon retained the powers of disciplinary control which he was exercising before. The work of the officers appointed was reported to be satisfactory, and the question was then raised whether the system might not be extended to other hospitals in the city. There were, however, some difficulties in the way of extending the scheme to the General Hospital, for it was feared that it would interfere with the clinical instruction of the Medical College students, since honorary workers could not be compelled to attend at fixed hours. Moreover, the system of appointing house physicians and surgeons had just then been introduced, and it was feared that the appointment of honorary physicians and surgeons would deprive the house surgeons and physicians of the facilities for practical work which formed the chief attraction to such posts. The Government ultimately decided to drop the proposal for the time being.

38. We have given our careful consideration to the question and have examined Colonel Elwes and Dr. Natesa Mudaliyar on the subject. A copy of their evidence is given in Appendix C. We would have been prepared to recommend that one hospital should be entirely handed over to a staff of honorary physicians and surgeons, but we were informed that the general opinion among the practitioners likely to take up honorary work was that this arrangement would not be acceptable. We have come to the conclusion that the scheme of appointing honorary physicians and surgeons in all the Presidency hospitals and the bigger mufassal hospitals is sound, but we consider that, until the system has been tried for some time, the honorary physicians and surgeons should be attached as supernumeraries and should not displace permanent officers. The adoption of our proposal will not therefore involve any reduction in the staff employed at present. We submit the following detailed proposals in respect of the Presidency hospitals for the consideration of the Government:—

Royapetta Hospital.—One honorary physician and one honorary surgeon may be appointed as supernumeraries for this hospital and each may be given charge of certain specified beds, but the Indian Medical Service officer will remain in administrative charge of the institution. The honorary physician and honorary surgeon should also do the clinical teaching in connexion with the beds in their charge.

General Hospital.—We consider that the General Hospital should be divided into two units, one surgical and the other medical, and that an honorary surgeon and an honorary physician should be attached to each of these two units respectively as supernumeraries.

Rayapuram Hospital.—One honorary physician and one honorary surgeon may be appointed as supernumeraries on the same conditions as at Royapetta.

Ophthalmic Hospital.—One honorary ophthalmic surgeon may be appointed as supernumerary on the same conditions as at Royapetta.

Maternity Hospital.—One honorary gynaecologist and obstetrician may be attached as supernumerary on the same conditions as at Royapetta.

Tuberculosis Hospital.—One honorary physician may be attached as supernumerary on the same conditions.

Caste and Gosha Hospital.—One honorary lady physician may be appointed as supernumerary.

Lunatic Asylum.—One honorary trained alienist may be attached as supernumerary.

Children's Hospital (when opened).—One honorary physician and one honorary surgeon on the same conditions as at Royapetta.

39. We consider that only medical practitioners who possess a degree recognized by the British Medical Council in England should be appointed as honorary physicians or surgeons. The appointments should be made by the Government on the recommendation of the Surgeon-General, if and when suitable persons can be found for such appointments. The number of beds to be in charge of an honorary physician or surgeon and the hours of work should be determined by the Surgeon-General, and it should be made a condition of appointment that clinical teaching should be given by such honorary physician or surgeon in connexion with the beds in his charge in any institution in which teaching is given.

40. *Military assistant surgeons.*—There are altogether 23 appointments which are reserved by the Government for military assistant surgeons (including the charge of the Government House dispensary), but there are now 27 officers actually in service. This arrangement, which has been in force since 1892, was intended to provide a sufficient reserve of warrant medical officers for duty in time of war. It was an essential part of the original scheme that neither the Local Government nor the Government of India should be put to any extra expense on this account, but it has been found in actual practice that the military assistant surgeons are much more expensive than the civil medical officers. The Madras Government pointed this out to the Government of India in 1896, but accepted the additional charge as they considered it was the duty of the Provincial Governments to assist in the maintenance of a war reserve. The professional qualifications of military assistant surgeons are inferior to those of civil assistant surgeons, but the scale of pay has been fixed considerably higher as will be observed from the statement given below:—

Pay of military assistant surgeons—

Fourth class (7 years)	...	...	...	...	...	Rs.
Third class (5 years)	...	...	...	...	...	200
Second class (5 years)	...	...	...	...	...	275
First class	...	...	...	...	...	350
Senior grade (Lieutenant)	...	...	...	...	...	*400
„ (Captain)	...	...	...	...	...	500
„ (Major)	...	...	...	...	...	650
	...	...	...	...	...	700

Pay of civil assistant surgeons—

Rs. 200—15—350—20—450.

Two appointments of civil surgeons are also reserved for military assistant surgeons. Excluding these two officers and also the one employed in Bangalore in

* Officers recruited before March 1908 will draw Rs. 450 after 20 years' service.

an appointment normally held by a European or Anglo-Indian civil assistant surgeon, there are now 24 military assistant surgeons in this Presidency, whose pay is shown in the statement below:—

6 on Rs. 700	2 on Rs. 275
1 on „ 650	
6 on „ 450	24, average pay Rs. 479 a month.
5 on „ 400	
4 on „ 350	

The average pay drawn by these officers at the present time thus amounts to Rs. 479 a month, while the average pay of civil assistant surgeons is only Rs. 344 a month in spite of the fact that the qualifications of the former are inferior.

41. Under the Reforms, the finances of Local Governments have been definitely separated from those of the Imperial Government, and under the Government of India Act and the Devolution Rules framed under it, the Local Governments are under no obligation to provide employment for Military Assistant Surgeons, although they are bound to employ a certain number of officers belonging to the Indian Medical Service. We do not however suggest that the Local Government should not assist in the maintenance of a war reserve, but we consider that if the Government of India desire the Local Government to provide employment for these officers the difference between the pay of a civil assistant surgeon and that of a military assistant surgeon should be debited to the Army Department or paid as a contribution from the Central Revenues. We understand that the Government of India have already agreed to pay the cost of training military assistant and sub-assistant surgeons in the medical college and schools of this Presidency, and we do not see on what grounds the additional burden involved in the maintenance of a war reserve can be thrown on the Provincial Governments. We have been told that military assistant surgeons are useful in certain classes of appointments (such as the Resident Medical Officers of the Presidency hospitals) where driving force and exercise of disciplinary control are essential for the successful discharge of the duties entrusted to such officers. We do not however consider that this would be a sufficient justification for the retention of these officers if the Government of India refuse to pay the difference in salary as suggested by us, for a large number of civil assistant surgeons were on field service and it should not be difficult to find among them suitable substitutes even for appointments where military training is found useful.

42. We observe, however, that the difference in pay between a military assistant surgeon and a civil assistant surgeon is almost negligible until the former reaches the rank of Lieutenant and we consider that it would be sufficient if the Government of India are asked to pay only the difference between the salaries of all military assistant surgeons who are Lieutenants, Captains and Majors and the average pay of the same number of civil assistant surgeons. According to our proposal the Government of India will have to pay at present a sum of Rs. 29,304 a year.

43. Incidentally, we also recommend that of the two appointments at Bangalore now included in the cadre of civil assistant surgeons, one may be reserved for a military assistant surgeon and the other for a civil assistant surgeon, but a military assistant surgeon may be appointed to the latter if no suitable civil assistant surgeon is available.

44. *Civil assistant surgeons and sub-assistant surgeons—Reserve medical subordinates.*—The Government at present maintain a leave and casualty reserve of 15 per cent of the total number of sanctioned appointments for civil assistant surgeons and 25 per cent of the appointments for sub-assistant surgeons. The actual strength of the cadre on the 19th July 1922 was as follows:—

<i>Civil Assistant Surgeons.</i>		<i>Sub-Assistant Surgeons.</i>	
Permanent appointments (including six civil surgeoncies)	181	Number of appointments	657
Leave reserve at 15 per cent	27	Leave reserve at 25 per cent	164
	208		821
Temporary appointments	28		
	236		

Of this reserve four civil assistant surgeons and 100 sub-assistant surgeons were not on that date holding any sanctioned appointment, but were attached as supernumeraries to certain hospitals, although the actual strength of the cadre was at that time less than the sanctioned number by ten assistant surgeons and ten sub-assistant surgeons. That is, if the strength of the cadre had been at its sanctioned strength there would have been on that date, fourteen assistant surgeons and 110 sub-assistant surgeons unemployed. We understand that the main reason why such a large percentage of reserve is normally unemployed is that sub-assistant surgeons do not usually take all the leave to which they are entitled. We consider that there is no justification for the maintenance of such a big reserve, for if at any time on account of plague or famine the strength of the cadre is found insufficient for additional work, it will always be possible for the Government to sanction temporary additions to the cadre to the extent actually necessary. We recommend that the reserve of sub-assistant and assistant surgeons should be reduced to 10 per cent of the number of sanctioned appointments. If our proposal is adopted, the strength of the cadre will have to be reduced by nine appointments of assistant surgeons and 131 appointments of sub-assistant surgeons. This will result in an average saving of Rs. 2,51,340; but we understand that the cadre is not at the sanctioned strength at present and that it will be actually necessary to discharge 108 sub-assistant surgeons. We would recommend in this connexion that the persons whose services are to be dispensed with should, as far as possible, be officers who are entitled to a full pension and who are not worth retaining in service.

45. *Substitution of sub-assistant surgeons for civil assistant surgeons.*—We understand that the standard of teaching at the medical schools has been raised very considerably during the last decade and also that a very much higher standard is expected of the candidates for the diploma of L.M.P. In fact it has been suggested to us by an Indian Medical Service officer who has had considerable administrative experience of the department that the cadre of assistant surgeons could without serious inconvenience be abolished entirely and sub-assistant surgeons appointed in their places. We cannot endorse this suggestion, for hardly any sub-assistant surgeon is competent to hold any of the appointments which are now reserved for the Indian Medical Service, and if the suggestion is adopted the Government will have to depend on sub-assistant surgeons to carry on the work of the officers reverted to military duty during a war; nor do we consider that the sub-assistant surgeons can adequately discharge the duties which are now entrusted to assistant surgeons. We agree, however, that it should be possible to substitute sub-assistant surgeons for assistant surgeons in some of the hospitals and dispensaries in this Presidency, and we recommend that the Surgeon-General should be requested to examine very carefully the list of appointments now reserved for assistant surgeons and to state in what stations sub-assistant surgeons can be appointed in the place of assistant surgeons.

46. *Hospitals and dispensaries.*—We have so far discussed the possibility of reducing the scales of pay and the cadre of the different classes of officers that constitute the Medical Department, and we now proceed to deal with the expenditure incurred on the maintenance of hospitals and dispensaries by the Government and local bodies. The expenditure on the hospitals and dispensaries maintained by Government is shown in the statement given below :—

	RS.		RS.
1917-18	11,84,432	1921-22	31,72,504
1918-19	15,50,955	1922-23 (Revised Estimate).	33,81,700
1919-20	21,58,533	1923-24 (Budget Estimate).	32,33,200
1920-21	26,83,740		

It will be observed that the expenditure has gone up from Rs. 11.84 lakhs in 1917-18 to 33.82 lakhs in 1922-23. The increase is largely due to the transfer of the mufassal headquarter hospitals and some of the Presidency hospitals to the Government in pursuance of the recommendation made by the Decentralization Commission. Twenty-four headquarter hospitals including the women and children's hospitals at Calicut, Mangalore and Salem were taken over by the Government between 1st December 1917 and 1st January 1921. The Royapetta hospital became a Government institution in 1919, the Victoria Caste and Gosha hospital in 1920 and

the Tuberculosis Institute in 1921. The Government Tuberculosis Hospital was also opened in 1921. The cost of maintenance of the headquarter hospitals in 1921 was Rs. 8.19 lakhs and of the four Presidency hospitals referred to above Rs. 3.54 lakhs. These institutions account for an increase of Rs. 12 lakhs out of the 22 lakhs shown in the statement given above. The remainder is due to the rise in prices and the revision of salaries of all grades of officers, medical as well as non-medical. In Appendix D we give a comparative statement of the expenditure on each of the medical institutions taken over by the Government, during the last five years.

47. *Presidency hospitals—House physicians and surgeons.*—The visiting staff of the General Hospital consists of three surgeons and four physicians each of whom has an assistant surgeon and as a rule two house surgeons and house physicians who are provided with free quarters but do not receive any salary. These assistant surgeons have no duties to be conducted at the Medical School or the Medical College. We understand that these assistant surgeons consider themselves entirely responsible for the wards in their charge and consequently the house physicians and house surgeons have no real responsibility and in this respect their training is deficient. We are informed that in England house surgeons and house physicians are in sole subordinate charge of the wards under the visiting staff and that the system has been working very efficiently and has enabled the house physicians and surgeons to obtain a really good practical training. We do not see why the same system should not be tried at the General Hospital provided adequate arrangements are made so as to ensure that some experienced medical officer whom the house surgeons and physicians can consult is always present at the hospital. We recommend that the house surgeons and physicians who are to take the place of assistant surgeons now in charge of the wards should in addition to free quarters get a ration allowance of Rs. 50 per month and we also consider that, in order to ensure an adequate supply of house surgeons and physicians, the Government should make it a rule that no one shall be appointed as a permanent civil assistant surgeon unless he has had at least one year's approved service as house surgeon or house physician in a selected Government hospital. These appointments will normally be held by graduates who have recently passed out of the Medical College, and since the visiting staff of physicians and surgeons of the General Hospital all have duties in connexion with the Medical College, they will be in a position to choose the best of the candidates for such appointments.

48. The Superintendent of the Maternity Hospital has no objection to the adoption of the scheme recommended above and he is prepared to substitute three house surgeons for two of the civil assistant surgeons and the junior military assistant surgeon now employed in the hospital; we understand that quarters are available for these officers.

49. The Superintendents of the Rayapuram and Royapetta hospitals are not in favour of any changes at present.

50. The scheme outlined above will result in a saving of Rs. 35,280 per annum.

51. We now proceed to deal with the expenditure on the maintenance of the Presidency hospitals. In Appendix E we give a comparative statement showing the expenditure on the different institutions during the last five years under the following heads :—

(1) Medical officers.	(5) Medicines.
(2) Nursing staff.	(6) Dieting charges.
(3) Clerical and other establishment.	(7) Contingencies.
(4) Menials.	

52. *Rayapuram Hospital.*—The number of beds at this institution has risen from 192 in 1917-18 to 250 in 1921-22 but the cost of the establishment has trebled while dieting charges have increased nearly five times. We understand that further additions to the staff have been applied for in connexion with the opening of the new clinical block recently constructed. Rents, rates and taxes (most of these in 1921-22 were charges levied by the Corporation for water supplied to the institution) have increased from Rs. 720 in 1917-18 to Rs. 10,169 in 1921-22.

53. *Lever Hospital.*—The average strength of this hospital was 222 in 1918 and 279 in 1922. The cost of the staff has increased from Rs. 8,208 in 1917-18 to

Rs. 16,620 in 1921-22 and there was a similar increase under dieting charges from Rs. 18,924 to Rs. 35,813. The increase under contingencies from Rs. 4,795 to Rs. 18,890 is attributed to the shifting of the hospital to the Emigration Depot, high prices, the Corporation water charges, etc.

54. *General Hospital*.—The number of beds at this institution has risen from 500 in 1917-18 to 520 in 1920-21. The cost of the establishment rose by 59 per cent during these five years and of diet by 124 per cent. The expenditure under rents, rates and taxes rose from Rs. 2,000 in 1917-18, 1918-19 and 1919-20 to nearly Rs. 15,000 in 1920-21 and 1921-22.

55. *Royapetta Hospital*.—This institution was taken over from the Corporation on the 1st October 1919 and the expenditure on the staff has gone up by 55 per cent and of dieting charges by 59 per cent.

56. *Ophthalmic Hospital*.—The average strength of this institution has risen from 205 in 1918 to 245 in 1922 or by about 20 per cent. The cost of the staff has risen more than 100 per cent but an assistant superintendent, a sub-assistant surgeon, a steno-typist, a store-keeper and some menial servants have been added to the staff. Dieting charges have increased from Rs. 23,484 to Rs. 55,490. The Superintendent proposes to restrict admissions and to modify the diet so as to secure a saving of about Rs. 7,000 a year. He has also suggested reductions amounting to Rs. 3,700 a year under bedding, clothing, hospital necessaries, rents, rates and taxes, electric lights and fans.

57. *Victoria Caste and Gosha Hospital*.—The average attendance at this hospital has been more or less stationary, but the cost of the staff has trebled during the last five years mainly owing to considerable additions to the staff found necessary for the efficient administration of the hospital. Dieting charges have increased from Rupees 6,250 to Rs. 15,286.

58. *Lunatic Asylum*.—The strength of this asylum has also been more or less stationary but the expenditure under staff has risen by nearly 60 per cent and under diet by nearly 128 per cent. The Superintendent considers that the cost of diet can be reduced by Rs. 30,000 a year. He states that patients are detained too long and on very costly 'extras'. He has also suggested the following reduction of staff:—

- (1) substitution of a sub-assistant surgeon for the Deputy Superintendent,
- (2) reduction of nurses from 8 to 5,
- (3) reduction of Anglo-Indian attendants from 5 to 3, and
- (4) the number of dhobis from 6 to 2.

We are not in favour of reducing the superior staff or the nursing staff but we consider that the number of dhobis should be reduced to 2 as suggested by the Superintendent. Until quite recently, we understand that only one dhobi was employed and he was assisted by the patients, many of whom wash their own clothes. The Superintendent reports that the dhobis are mostly employed in washing the clothes of the staff. So the reduction we have proposed will not result in any inconvenience, except possibly to the staff.

59. The Superintendent's statement that a reduction of at least Rs. 30,000 under dieting charges and hospital necessaries is possible, is borne out by the following statement showing the actual retrenchment he has been able to effect during February and March 1923:—

Diets and hospital necessaries.

							1922	1923
							RS.	RS.
February	...	...	...	...	...	...	12,162	9,968
March	...	...	...	...	...	...	13,413	8,929
Total	...	...	...	...	...	...	25,575	18,897

Thus, during these two months under only two heads of expenditure there has been a reduction of Rs. 6,678. This indicates a possible reduction of Rs. 40,000 a year. The Superintendent also states that under other heads he expects a saving of

Rs. 10,000 to Rs. 20,000 during the current year. We, therefore, recommend that the allotment for the Lunatic Asylum for the current year be reduced by Rs. 40,000.

60. *Maternity Hospital*.—The number of beds in this hospital has remained stationary throughout the last quinquennium. The expenditure on almost all heads has, however, doubled.

61. *Hospital contracts*.—We shall briefly describe the arrangements for the supply of the articles of diet to the General hospital which were approved by the Government in 1904. The method of purchase prescribed is a combination of the contract and the departmental systems. Tenders are called for half-yearly in the form prescribed by the Government for such articles as rice, dhol, condiments, etc., which can be stored in bulk, while perishable articles, such as chickens, cheese, biscuits, etc., are purchased departmentally from markets or from local firms. These latter, which are articles of luxury, are only purchased in small quantities as required and paid for from the permanent advance, and they are chiefly supplied to patients who pay for them. When tenders are received, they are opened by the Senior Medical Officer in person and contracts are entered into by that officer. Such articles as are received in bulk are usually obtained in sufficient quantities to last for about six months and are stored in the hospital stores. Milk, which is one of the most expensive items in hospital diets owing to the large quantity required, is obtained on an annual contract, the condition being that the contractor shall keep a sufficient number of cows on the hospital premises to meet the requirements of the hospital morning and evening. The method of purchase of diet articles in the other medical institutions in the City is more or less similar to that described above.

62. We shall first deal with the question of rates of supply. We have obtained for each article of diet statements from all the Presidency institutions showing the quantity purchased and the rates charged by the contractor. As we have noted, the Superintendent of each hospital makes separate arrangements for the supply of articles of diet required for his institution. Only in the case of one article, viz., firewood, is the contract entered into by the Surgeon-General for all the hospitals together. Consequently, there are large variations in the rates tendered and accepted for different hospitals. The following are typical instances:—

The rate for fish at the Rayapuram hospital was annas four a pound, at the General hospital annas eight and at the Royapetta hospital annas six and pies six. For butter the rate was Rs. 1-3-0 a pound at the Rayapuram hospital, Rs. 1-4-0 at the General hospital and Rs. 1-6-0 at the Royapetta hospital. For boiled rice in 1920-21 the rate at the Rayapuram hospital was annas two a pound, at the General Hospital annas two and pies five and at the Royapetta hospital annas two and pies six. For milk in 1920-21 the rate at the Rayapuram hospital was annas three and pies four per pint, at the General Hospital annas three and pies nine and at the Royapetta hospital annas three and pies three, and so on. We understand that these variations are partly, if not entirely, due to the fact that in the case of hospitals which obtain large quantities, more favourable rates are obtained as wholesale merchants are in a position to tender for such institutions. We recommend that, so far as the main articles of diet are concerned, the Surgeon-General should in future contract for all the Presidency hospitals for each article separately. Basing our calculations on the lowest rates tendered for each article during last year, we estimate that the procedure suggested above will result in a saving of over Rs. 30,000 a year.

63. We shall now deal with the consumption of articles at the different Presidency institutions. The following statement shows the quantity consumed per patient at the Rayapuram, the General and the Royapetta hospitals. We have taken only these three institutions into consideration for comparative purposes, for the other hospitals are all special institutions such as the Maternity and Tuberculosis hospitals where special articles of diet have very often to be used. We give a statement below for these articles:—

- | | |
|-----------------------------|---------------------------|
| (1) Sugar, white and brown, | (6) Eggs, |
| (2) Boiled rice, | (7) Fish, |
| (3) Bread, | (8) Milk, |
| (4) Butter, | (9) Mutton with bone, and |
| (5) Chicken, | (10) Mutton without bone. |

Comparative statement showing the quantity and the price of articles of diet purchased at the Presidency Hospitals during the last five years.

Articles.	Year.	Rayapuram Hospital.				General Hospital.				Government Royapetta Hospital.			
		Average strength.	Quantity purchased.	Rate.	Quantity per patient.	Average strength.	Quantity purchased.	Rate.	Quantity per patient.	Average strength.	Quantity purchased.	Rate.	Quantity per patient.
Sugar (castagram) (lb.).	1918-19	149	350	RS. A. P. 0 3 0	2	404	..	..	..	84	..	RS. A. P. 0 3 0	..
	1919-20	178	340	0 3 3	2	422	7,206	..	17	87	..	..	..
	1920-21	217	1,350	0 5 5	6	428	11,887	..	28	88	2,725	0 6 6	31
	1921-22	226	1,710	0 5 6	8	459	11,049	..	24	104	3,686	0 3 8	35
	1922-23	..	1,300	0 3 3	..	..	..	..	..	..	2,320	(18 8 0 per packet of 80 lb.) 0 3 8	..
Sugar (brown) (lb.).	1918-19	149	4,600	0 2 0	31	404	..	..	..	84	..	..	..
	1919-20	178	5,501	0 1 11	31	422	6,721	..	16	87	..	..	..
	1920-21	217	7,896	0 3 4	36	428	3,123	..	7	88	..	..	..
	1921-22	226	6,680	0 3 3	30	459	2,668	..	6	104	160	..	..
	1922-23	..	7,500	0 2 8	..	..	..	..	..	..	2,400	18 0 0 per packet of 80 lb.	1
Rice (boiled) (lb.).	1918-19	149	30,400	0 1 7	204	404	..	..	..	84	..	..	..
	1919-20	178	36,378	0 2 0	204	422	48,113	0 2 4	114	87	..	..	..
	1920-21	217	44,000	0 2 0	203	428	50,010	0 2 5	116	88	14,800	0 2 6	168
	1921-22	226	44,200	0 1 11	196	459	59,781	0 1 9	130	104	16,200	0 2 0	156
	1922-23	..	40,000	0 1 7	..	..	..	..	..	..	15,480	0 1 8	..
Bread (lb.).	1918-19	149	9,394	0 1 10	63	404	..	..	..	84	..	..	..
	1919-20	178	15,422	0 2 5	87	422	49,361	0 2 5	117	87	..	..	..
	1920-21	217	23,081	0 2 4	108	428	53,216	0 2 6	124	88	6,951	0 2 8	79
	1921-22	226	20,335	0 2 3	90	459	55,141	0 2 4	120	104	8,967	0 2 3	86
	1922-23	..	20,011	0 2 0	..	..	..	..	..	..	9,523	0 2 2	..
Butter (lb.).	1918-19	149	45	0 12 0	3	404	..	..	..	84	..	..	..
	1919-20	178	74	1 4 0	4	422	2,119	1 6 0	5	87	..	..	..
	1920-21	217	320	1 2 0	14	428	2,295	1 7 0	5	88	..	..	..
	1921-22	226	225	1 3 0	1	459	2,208	1 4 0	5	104	92	1 8 0	1
	1922-23	..	208	1 3 0	..	..	..	..	..	..	97	1 6 0	9
Chicken (No.).	1918-19	149	18	0 6 0	1	404	..	..	..	84	..	..	..
	1919-20	178	71	0 9 6	4	422	11,598	0 9 0	27	87	..	..	..
	1920-21	217	636	0 11 0	3	428	13,524	0 10 0	32	88	..	..	..
	1921-22	226	234	0 11 0	1	459	9,832	0 10 0	21	104	34	0 14 0	3
	1922-23	..	33	0 10 6	..	..	..	..	..	..	58	0 12 0	5
Eggs (No.).	1918-19	149	3,027	0 0 7	20	404	..	..	..	84	..	..	..
	1919-20	178	4,941	0 0 9	28	422	58,451	0 0 7	139	87	..	..	..
	1920-21	217	14,815	0 0 11	67	428	81,267	0 0 10	190	88	..	..	..
	1921-22	226	17,768	0 1 0	79	459	61,181	0 0 10	133	104	5,075	0 1 0	58
	1922-23	..	14,653	..	..	..	..	..	..	..	8,838	0 1 0	85
Fish (lb.).	1918-19	149	1,233	0 4 0	8	404	..	..	..	84	..	..	..
	1919-20	178	2,136	0 4 6	12	422	4,450	0 6 0	11	87	..	..	..
	1920-21	217	2,509	0 4 0	12	428	4,654	0 7 0	11	88	..	..	..
	1921-22	226	2,267	0 4 0	10	459	5,376	0 8 0	12	104	1,027	0 6 0	12
	1922-23	..	2,545	0 4 0	..	..	..	..	..	..	986	0 6 6	9
Milk (pints).	1918-19	149	51,562	0 1 9	346	404	..	..	..	84	1,015	0 7 0	..
	1919-20	178	75,944	0 3 8	427	422	250,119	0 3 7	593	87	..	..	..
	1920-21	217	122,864	0 3 4	566	428	268,405	0 3 9	627	88	..	..	..
	1921-22	226	127,619	0 3 8	565	459	252,608	0 3 6	550	104	35,732	0 3 3	406
	1922-23	..	116,979	0 3 2	..	..	..	..	..	..	39,261	0 3 6	378
Mutton with bone (lb.).	1918-19	149	1,246	0 5 3	8	404	..	..	..	84	43,127	0 3 2	..
	1919-20	178	2,528	0 5 3	14	422	11,458	0 5 0	27	..	..	..	..
	1920-21	217	6,027	0 6 0	28	428	14,143	0 7 0	33	..	..	..	..
	1921-22	226	3,766	0 8 0	17	459	13,121	0 8 0	29	..	..	..	..
	1922-23	..	2,773	0 8 0	..	..	..	..	..	..	..	..	..
Mutton without bone (lb.).	1918-19	149	5,366	0 6 0	36	404	..	..	..	84	..	..	..
	1919-20	178	8,801	0 6 0	47	422	14,509	0 5 10	34	87	..	..	..
	1920-21	217	11,187	0 6 9	52	428	15,170	0 8 6	35	88	..	..	..
	1921-22	226	11,505	0 9 0	51	459	17,296	0 9 0	38	104	4,377	0 7 6	50
	1922-23	..	8,289	0 8 6	..	..	..	..	..	..	4,559	0 8 6	44

It will be observed that the quantity of milk consumed per patient has increased from 346 pints to 565 pints at the Rayapuram hospital, the quantity of mutton bread from 36 lb. to 51 lb., the number of eggs from 20 to 79, and the quantity of consumed by each patient at the different institutions. It would be difficult to explain these variations except on the supposition that there is a considerable amount of wastage. We are convinced that the expenditure on diet can be very considerably reduced, but within the time at our disposal it has not been possible

for us to examine in detail the accounts of each of these hospitals and to discover where the leakage has been taking place. We strongly recommend that a Deputy Collector to be responsible to the Surgeon-General should be appointed immediately to see that contractors supply to the hospitals the quantities indented for and that the materials are of the quality required, and to control, inspect and supervise internal economy in general. The Deputy Collector, who should be a selected officer, may be appointed for three years at a time on the ordinary scale of pay plus the usual Presidency allowance. His business will be to see that economy is exercised in respect of indents and the consumption of stores of all kinds in all the Presidency hospitals, including the Lunatic Asylum. He will not have, of course, power to issue orders to the officers in charge of the hospitals, but he should have free access at all hours of the day and night to the hospitals and he should be allowed to inspect diet sheets and all documents and accounts relating to the stewards' department and the stores (including medical stores) of hospitals. He should have power to inquire at any time into the recovery of hospital stoppages. He should be given a small clerical and menial staff to assist him.

64. The specific proposals we have made regarding the Lunatic Asylum and hospital contracts will result in a saving of Rs. 70,000 per annum, and we are convinced that if a competent Deputy Collector is placed in charge, the total savings in the expenditure on all the Presidency institutions will not be less than Rs. 2 lakhs.

65. *Reorganization of medical relief.*—We have reserved this subject to the last, for we are not in a position to make definite proposals for the reorganization of medical relief owing to the fact that the Government have not yet decided exactly how much they will be able to spare for subsidising medical institutions maintained by local bodies. As we have already noted, in addition to the Presidency hospitals, the Government maintain 24 district headquarter hospitals and four institutions for women and children. As regards hospitals and dispensaries maintained by local bodies, the Government provide medical officers out of the Provincial cadre on payment of a fixed annual contribution equivalent to the average salary of the class of officers employed. The local bodies are under no obligation to employ these officers, and the powers of control which the Government can exercise under the Local Boards and District Municipalities Acts are quite inadequate for administrative purposes. Local bodies, however, receive heavy subsidies from Provincial funds for the administration of the services entrusted to them, and the Government have been able to enforce efficiency as regards medical institutions by insisting on the appointment of Government Medical officers, who are under the disciplinary control of the Surgeon-General, at local fund and municipal institutions. Thus the efficiency of any system that may be proposed will depend on the financial pressure which the Government can bring to bear on local bodies. We cannot, therefore, formulate any detailed proposals for the reorganization of medical relief until the Government decide what the Provincial subsidy for medical institutions is to be. We shall, however, indicate the general lines on which medical relief can, in our opinion, be more economically reorganized.

66. We have already recommended that the scales of pay recently sanctioned for civil assistant surgeons and sub-assistant surgeons should be retained. But we consider that the employment of these officers in the minor hospitals and dispensaries maintained by local bodies is an unnecessary waste of money. We submit the following recommendations for the consideration of the Government:—

(1) The Government should continue to maintain the district headquarter hospitals, but it should be possible to have a combined headquarter hospital for two districts in some cases. For instance, we consider that there is no justification for the maintenance of a headquarter hospital at Ramnad, which is a comparatively unimportant town. The headquarters of the principal district officers are at Madura, which is the most central place in respect of communications for both districts. We recommend that on the appointment of district health officers for Madura and Ramnad, the two districts should be placed in the medical charge of the same district medical officer who should, however, be given a civil surgeon to assist him in all branches of his work, including school, hospital and inspection work. Since, however, the Government have definitely bound themselves to maintain a medical

institution at Ramnad, a hospital in charge of an assistant surgeon will have to be retained at Ramnad, but our proposal will enable the Government to dispense with a portion of the establishment now maintained at the Ramnad hospital. We would also suggest that the justification for the maintenance of a headquarter hospital at Chingleput be examined in consultation with the President of the District Board and the Surgeon-General, since the Madras hospitals are always available for the inhabitants of this district.

(2) In addition to the maintenance of the headquarter hospitals, we consider that Government should pay half the cost of one or two surgical centres to be maintained in each district. These surgical centres should have a civil assistant surgeon as well as a sub-assistant surgeon, and the Government grant should be made subject to certain conditions as regards maintenance and equipment.

(3) As regards other medical institutions in the district we consider that it would be sufficient to maintain a district cadre of medical officers, provided the actual appointment is in each case subject to the approval of the Surgeon-General. The Government contribution to these institutions may be a percentage of the cost of maintenance of these institutions, the percentage to be determined by the Government with reference to the total amount available for subsidies towards the medical institutions and the needs of each district, taking into consideration the facilities for medical relief already available.

67. If our proposals are given effect to, the provincial cadre of medical officers will be restricted to the number required for service at the Government medical institutions and at the surgical centres we have referred to. The Surgeon-General should have absolute control over these officers and the grant towards the maintenance of these surgical centres should be made subject to this condition. The officers who are to be employed by the district boards and who will constitute the district cadre will not be liable to transfers out of the district and they will be entirely under the control of the district board. The Government will be in a position to ensure efficiency by insisting on the approval of the Surgeon-General for the initial appointment of all district officers and by making subsidies towards the medical institutions subject to the condition that the district medical officer certifies that the institutions under their charge have been maintained efficiently.

68. It is not possible for us to estimate what reduction in the expenditure on local fund and municipal institutions will result from our proposals, but it is likely to be several lakhs of rupees, for the total contribution to provincial funds now paid by local bodies for the medical officers lent to them amounts to Rs. 11.70 lakhs a year. We have been informed that in some districts it will be practicable to appoint honorary physicians to the medical institutions under the local bodies. At any rate, it is likely that the salary demanded by local medical practitioners will be very much lower than that sanctioned for Government medical officers. These practitioners will probably be inferior to the Government medical officers, but we have proposed that they should be employed only at the less important institutions and subject to adequate safeguards against incompetency.

69. We observe that the adequacy of medical relief in all the districts has been exhaustively reviewed by the Government in their Order No. 1606, P.H., dated 28th November 1921. The Government have already pointed out the wastefulness of employing a whole-time officer in a dispensary which does not provide sufficient work for a whole-time man, and they have suggested that such dispensaries should be closed for two or three days in a week and the medical officer in charge required to tour, visiting specific places on specific week days. In the annexure to that Order the Government have also suggested the possibility of abolishing certain dispensaries. We recommend that local bodies be induced to give effect to these proposals as early as possible.

70. *Medical College and Schools.*—The Government maintain the Medical College in Madras and the Medical Schools at Rayapuram, Tanjore, Calicut, Vizagapatam and Madura. The expenditure on these institutions during the last five years is shown in the statement below :—

	RS.		RS.
1917-18	3,58,596	1921-22	9,21,215
1918-19	4,55,766	1922-23	7,64,900
1919-20	5,79,335	1923-24	8,18,900
1920-21	6,84,715		

71. *Medical College.*—Until 1914, the fees levied at the Medical College from students for the L.M. & S. and M.B. courses were Rs. 470 and Rs. 610 respectively for the whole course, if paid in instalments, or Rs. 400 and Rs. 500, if paid in a lump sum. In that year, the course of training for the L.M. & S. was extended from four to five years and the curriculum of studies for the two courses made identical. The Surgeon-General then recommended that the fees for either course might be fixed at Rs. 750, that is, Rs. 150 a year. It was considered that this rate would still be very cheap. The Government did not however consider it necessary to raise the fee as suggested and sanctioned a fee of Rs. 120 a year (i.e., Rs. 600 for five years) or Rs. 540 for the full course if paid in a lump sum. This rate is still in force. The cost of the institution has more than doubled during the last five years, and we are of opinion that the decision referred to above should be reconsidered now. The number of applications for admission has increased from 159 in 1918 to 309 in 1921 and to 251 in 1922. Of the candidates for admission in 1922 only 91 could be admitted to the College. We do not consider that the raising of the fees will appreciably affect the number of admissions. The cost of educating one student at the Medical College is approximately Rs. 900 per annum and the fee paid by the student is a small fraction of the actual cost of his education. We therefore recommend that the fees at the Medical College be raised to Rs. 200 per year or Rs. 900 for the whole course subject to a suitable number of scholarships being awarded on the result of an entrance examination. It has been represented to us that the raising of the fee will be a great hardship on the middle classes, from among whom the students of the College are mainly drawn, but we do not consider that this would be an adequate justification for burdening the general taxpayer with a large proportion of the cost of this institution.

72. This proposal will bring in an additional income of about Rs. 40,000 per annum.

CHAPTER IV.—ALLOWANCES.

73. We shall deal in this chapter with the large number of allowances which are a striking feature of the Medical and Public Health budget. We have already in the last chapter suggested a redistribution of the work now allotted to the officers holding professorial appointments in the Presidency town, and we have suggested that they should be placed on an enhanced scale of pay and that all the allowances except those which are given for definite work of an administrative nature should be abolished. We now proceed to examine the list of allowances prepared by Mr. R. W. Davies, the Secretary of the General Retrenchment Committee. He has classified them under the following heads :—

Class I. Added responsibility.	Class IX. General (including house-rent and free quarters).
" II. Specific additions to work.	" X. Tentage (None in the Medical Department).
" III. Arduous or dangerous.	" XI. Travelling allowance.
" IV. Unhealthy localities.	" XII. Uniform allowances (Dealt with under class XIV).
" V. Expensiveness of locality.	" XIII. Private practice.
" VI. Unattractive localities (None in the Medical Department).	" XIV. Miscellaneous.
" VII. Conveyance allowance.	
" VIII. Allowance for special qualifications.	

Class I. Allowances—Added responsibility.

74. *Resident Medical Officer, General Hospital.*—This appointment is normally held by an officer of the Indian Medical Service, who draws an allowance of Rs. 200 as Resident Medical Officer on account of the 'additional duties and responsibilities' attaching to the post. We understand that certain specific duties are allotted to the Resident Medical Officer and it is not easy to define what these additional duties and responsibilities are. We observe however that the Resident Medical Officer is

debarred from private practice, and we consider that the allowance of Rs. 200 now drawn by him should be definitely recognized as compensation for loss of private practice and that it should be classified as a private practice allowance under class XIII; but we consider that no allowance as such need be paid to him, and that he should get pay according to the second enhanced scale, that is, the grade pay of the Indian Medical Service plus Rs. 200 in the case of Indian Medical Service officers. We also recommend (by a majority, Colonel Symons and Major Russell dissenting) that the Resident Medical Officer should be charged rent for the house he is required to occupy.

75. *Director of the King Institute.*—The appointments in the Bacteriological Department carry the enhanced rates of pay (that is, the grade pay of the Indian Medical Service plus Rs. 250) and Directors of first-class Provincial Laboratories are also granted an allowance of Rs. 200 a month. The Directors of Pasteur Institutes get an allowance of Rs. 100 per month. We do not see sufficient justification for the grant of a charge allowance to these Directors, but as we have noted all officers in the Bacteriological Department who are in charge of such institutes are given this allowance. The appointment of officers to these posts is made by the Government of India, and we consider that a reduction or the abolition of the charge allowance will make it difficult for the Government of India to post a competent officer to the institutes in this Presidency, if such allowances are normally granted in other provinces. In view of these circumstances we recommend that this allowance be retained, unless the Government of India decide to abolish this allowance throughout India.

76. *Civil assistant surgeons and military assistant surgeons holding Indian Medical Service posts in the mufassal.*—Rs. 100 or Rs. 150.—This allowance was sanctioned in 1917 on account of the 'increased work and responsibility devolving on assistant surgeons when holding Indian Medical Service appointments'. As the rules stand at present a permanent civil surgeon in charge of a district which is not reserved for the Indian Medical Service gets only his scale pay, that is, Rs. 500—50—900 but an *assistant surgeon acting* as a District Medical and Sanitary Officer is entitled to the same scale of pay and in addition an allowance of Rs. 100, and his officiating service is also counted for incremental purposes. Thus an assistant surgeon acting as the District Medical and Sanitary Officer of Anantapur gets a higher salary than a permanent civil surgeon who is the District Medical and Sanitary Officer of Ramnad. The position is anomalous, and we have been unable to discover any justification for the retention of this allowance. We recommend that it be abolished. There are now fifteen officers of the Provincial Service acting in Indian Medical Service posts. The abolition of the allowance will result in a saving of Rs. 18,000 a year.

77. *Assistant surgeon as Assistant Superintendent, Ophthalmic Hospital.*—Rs. 100 a month.—This appointment although created for an officer of the Indian Medical Service has always been held by an assistant surgeon. Our recommendation regarding Civil Assistant Surgeons holding Indian Medical Service posts will therefore apply to this case. The allowance should, we consider, be abolished.

78. *Civil and military assistant surgeons—Charge allowance.*—Rs. 30 a month.—This allowance which was sanctioned in 1905 is paid to all civil and military assistant surgeons who are in independent or subordinate charge of hospitals or who are holding sanctioned appointments either in the Presidency town or in the districts. The question of abolishing this allowance has been discussed on several occasions. In 1913 and 1916 when the question of the revision of the pay of assistant surgeons was under consideration the possibility of abolishing this allowance was discussed, but the Government then decided to retain it because the minimum pay of this class of officers was only Rs. 100 and also because the new scale of pay sanctioned in 1916 benefited only the senior officers and junior officers would consequently suffer if the allowance was abolished.

79. The pay of assistant surgeons has again been revised and the minimum pay raised to Rs. 200, i.e., an increase of 100 per cent. The pay of the service has thus been twice revised. Prior to 1916 civil assistant surgeons were getting Rs. 100, Rs. 150 and Rs. 200. In 1916 they were placed on a time-scale ranging from Rs. 200 to Rs. 300 with two senior grades on Rs. 325 and Rs. 250. In 1920,

the pay was revised to a time-scale ranging from Rs. 200 to Rs. 450. It will be observed that this allowance has never been sanctioned for any specific addition to work, and its retention has always been justified on account of the inadequate pay paid to these officers. Since the pay has now been very substantially raised, we do not consider there is any justification for the retention of this allowance. We also observe that the Surgeon-General has recently suggested that it might be abolished. We recommend that the Surgeon-General's proposal be given effect to.

80. There are now 145 appointments carrying this charge allowance. The abolition of this allowance will result in a saving of Rs. 52,200 as shown below :—

	Permanent.	Temporary.
Government appointments	37	23
Local fund and municipal appointments	85	...
Total number of appointments carrying the allowance ...	145	
Total saving (145 × 30 × 12 =)	Rs. 52,200	

81. *Assistant surgeons as Assistants to District Medical and Sanitary Officers.*—*Duty allowance.*—Rs. 50 a month.—These assistants now get an allowance of Rs. 50 per month in lieu of the charge allowance of Rs. 30 referred to above, because when the District Medical and Sanitary Officer occasionally goes on tour they are in sole charge of the district headquarter hospital. We do not see sufficient justification for the payment of a regular monthly allowance for occasional work of this sort. These assistant surgeons are stationed at the headquarters of the district where opportunities for private practice are usually greater than in outlying stations. The allowance, we consider, should be abolished.

82. There are 23 such officers, and the abolition will result in an annual saving of Rs. 13,800.

83. *Civil Assistant Surgeon, St. Bartholomew's Hospital, Ootacamund.*—*Allowance.* Rs. 50.—This allowance was originally granted not because the officer was an Assistant to the District Medical and Sanitary Officer but on account of the 'important and difficult nature' of his charge. We are unable to discover why the duties at this hospital have been considered to be more important and difficult than similar duties elsewhere, and we also understand that this hospital has now become the headquarter hospital of the district. We therefore consider that there is no longer any justification for the retention of this allowance, and recommend that it be abolished immediately.

Class II.—Allowances—Specific additions to work.

84. In the Medical Department there are a large number of posts to which collateral charges are attached, and in almost every case an allowance is given for the additional work assigned to the medical officers. These allowances have been justified on the ground that in fixing the pay of medical officers the Government have assumed that the officers will have a reasonable amount of time at their disposal for private practice and they would consequently be in a position to add to their income by means of such practice. We have been asked to consider to what extent the Government have a claim upon its medical officers. According to the Civil Medical Code an officer in the district is expected to be three hours in the morning at the hospital and two hours in the afternoon. But the Government have never attempted to define exactly how much work may be expected of medical officers. We are unable to lay down any hard-and-fast rules on the question and we have therefore decided to deal with each individual case on its merits. In the last chapter we have already recommended that the Director of King Institute, the Principal of the Medical College, and the Superintendent, General Hospital, should be given an allowance of Rs. 200, Rs. 150 and Rs. 150, respectively, on account of the administrative responsibility involved. We now proceed to deal with the other allowances included in Mr. Davies's list.

(i).—Gazetted Officers.

85. *Surgeon, First District, and Superintendent, Rayapuram Hospital.*—This officer now gets an allowance of Rs. 200 as Superintendent of the Medical School and Rs. 75 as Medical Inspector of Emigrants. We consider that the officer discharging the work

of these appointments should be designated the Superintendent of the Medical School, Rayapuram, but he should continue to discharge the duty of Superintendent of the Rayapuram Hospital, Surgeon, First District, and Medical Inspector of Emigrants. We recommend that the appointment of Superintendent, Medical School, Rayapuram, should be included among those who are entitled to the enhanced scale of pay as Professors at the Medical College and that all the allowances drawn by him should be abolished.

86. *Surgeon, Fourth District, and Superintendent, Royapetta Hospital.*—This officer now receives an allowance of Rs. 200 for three months for teaching sub-assistant surgeons undergoing the Post-Collegiate course. We consider that a fixed fee of Rs. 500 would be more appropriate for a course of this kind, and we recommend that this allowance may be abolished.

87. This officer also receives an allowance of Rs. 200 for imparting clinical instruction to students from the Rayapuram Medical School. We have already recommended that this officer who is also a Professor at the Medical College should be placed on the enhanced scale of pay, and we recommend that this allowance may be abolished.

88. *District Medical and Sanitary Officers, Vizagapatam, Tanjore, Calicut and Madura.*—These officers now get an allowance of Rs. 150 each for being in charge of the Medical school at these places. Since the charge of a medical school involves additional administrative work which cannot be regarded as a part of District Medical officer's duty we consider that an allowance is justifiable for added responsibility, but we recommend that it should be reduced to Rs. 100 a month and that it should be included in class I.

89. *District Medical and Sanitary Officer, Chingleput.*—This officer gets an allowance of Rs. 100 a month as Superintendent of the Reformatory School at Chingleput. We understand that an officer of the Education Department is in administrative charge of the school, and we consider that this allowance should be abolished.

90. *District Medical and Sanitary Officer, Calicut—charge of Lunatic Asylum.*—Rs. 50 a month.—We consider that, as there is a resident assistant surgeon in direct charge of the Asylum and as the treatment of mental diseases in the Lunatic Asylum is the legitimate work of the District Medical Officer, no allowance should be paid to the District Medical and Sanitary officer for the charge of the Lunatic Asylum. The allowance may therefore be abolished.

91. *District Medical and Sanitary Officer, Ganjam.*—Rs. 75 (*District Jail allowance*).—This is the only district jail of which the District Medical and Sanitary Officer is at present in charge. We consider that there is very little justification for the grant of an allowance for the medical charge of jails, but for the administrative charge of jails which cannot be considered to be the legitimate work of a medical officer the allowance should be paid. We therefore recommend that this allowance may be retained under class I on the distinct understanding that it is for the administrative charge of jails and not for the medical treatment of prisoners.

92. *Military assistant surgeons in charge of the Koraput and the Russellkonda Sub-Jails.*—Rs. 25.—Since these appointments involve additional administrative work we consider that this allowance may be retained under class I.

93. *Dental Surgeon, General Hospital.*—This officer receives Rs. 200 per month for six months for Post-Collegiate work and the second Dental Surgeon receives Rs. 100 a month for six months. We consider that a consolidated fee of Rs. 1,000 should be paid to the Dental Surgeon and a fee of Rs. 500 to the second Dental Surgeon and that the allowances should be abolished. A fixed fee is more appropriate in this case, as we understand that the courses are not held every year.

94. *Superintendent, Lunatic Asylum.*—Allowance Rs. 200 a month.—We have already recommended that the enhanced scale of pay should be attached to this appointment and we recommend that this allowance be abolished on the introduction of the enhanced scale of pay.

95. *Deputy Superintendent, Lunatic Asylum, Madras.*—This officer is a military assistant surgeon who draws the following allowances:—

(1) A Lunatic Asylum allowance which varies from Rs. 75 to Rs. 200 according to the length of service.

(2) An allowance of Rs. 40 for assisting the Superintendent of the Asylum in giving clinical training in mental diseases to Medical College students.

(3) An allowance of Rs. 50 for teaching the Rayapuram Medical School students for three months.

(4) Rupees 50 for one month for teaching students from mufassal medical schools.

He is also entitled to freequarters. We do not see sufficient justification for the payment of such a large number of allowances and we consider that this officer should get a consolidated allowance of Rs. 200 under class III (Arduous or Dangerous) for all the work which he is now doing, including clinical teaching. He should get no other allowance, and he should also be charged rent for the house which he is required to occupy.

96. *Assistant Surgeon, Lunatic Asylum, Madras.*—This appointment carries an allowance of Rs. 50 for three months for clinical teaching to Rayapuram School students. We understand that although the assistant surgeon is entitled to this allowance, it has actually been drawn by the military assistant surgeon who is Deputy Superintendent. We recommend that it should be definitely abolished. The Deputy Superintendent will continue to do the work as part of his ordinary duties.

97. *Teaching allowances.*—We now proceed to examine the justification for the grant of a special allowance to the Assistant Professors at the Medical College, the Lecturers at the medical schools and the Assistant Lecturers at the medical schools. The question of constituting an entirely specialized and separate teaching service within the medical service was considered in 1918. The idea then was that the officers entering this service should regard teaching as their life-work and should continue in that branch for the whole of their service. A special scale of pay was to be attached to this service and the teaching allowance hitherto granted was to be abolished. The Government were, however, opposed to the theory of a teaching branch of the medical profession, because they feared that an officer in that service would be cut off from the full tide of medical work and would consequently soon become out-of-date, stale and indifferent. Medical officers, are therefore, now not graded into a teaching profession, and we do not recommend any change in the policy of the Government as regards this point. Since the very best men are required for teaching work at the college and at schools, the present system involves the transfer of very competent officers from stations in the mufassals to the Madras City or to Rayapuram, Vizagapatam, Tanjore, etc., where medical schools are located. An assistant surgeon in an outlying mufassal station is the chief medical officer in the place and has the advantage of private practice among a large population, and if he is transferred from such a position to a teaching appointment his position and prospects are radically changed. His teaching work prevents him from being able to take much practice even if it could be obtained, but in addition to this he finds himself in competition with all the other teaching officers in the school or college and also other medical officers at these big cities. In consequence, the private practice which a teaching officer gets either in Madras or in the cities where medical schools are located is comparatively small. If on any grounds an additional allowance is not given to this class of officers, we fear that the Lecturers and Assistant Professors will be very discontented and that the quality of the instruction will suffer considerably. We are, therefore, of opinion that a teaching allowance is thoroughly justified, but in view of our recommendation that the charge allowance of Rs. 30 should be abolished, we consider that the special remuneration may be fixed at Rs. 75 per month in the case of assistants to professors at the Medical College and Rs. 100 in the case of lecturers in medical schools.

98. We do not recommend, however, that this sum should be given as a definite allowance. We have already suggested in the case of the Indian Medical Service that all the Professors should be placed on an enhanced scale. We would suggest that a similar enhanced scale of pay be created for each class of medical officers, i.e., civil surgeons, assistant surgeons and sub-assistant surgeons, the enhanced

scale of pay in each case to be the grade pay plus an allowance of Rs. 150 in the case of civil surgeons, Rs. 100 or Rs. 75 in the case of assistant surgeons and Rs. 30 in the case of sub-assistant surgeons. We also recommend that the list of appointments to which the enhanced scale of pay is to be attached should not be confined to the teaching appointments, but should also include other appointments to be held by selected officers. We give below a tentative list of appointments for which, in our opinion, the enhanced scale of pay may be sanctioned:—

I. *Civil surgeons.* (Allowance of Rs. 150 per month)—

(1) Assistant to the Chemical Examiner.

(2) Civil Surgeons at the Guindy Institute.

II. *Assistant surgeons.*—

(a) First enhanced scale (Rs. 100 per month).

(1) Lecturers in medical schools.

(2) Assistant Superintendents of medical schools (these officers should be given an additional allowance of Rs. 50 per month for administrative work connected with the school).

(b) Second enhanced scale (Rs. 75 per month).

(1) Assistant Professors at the Medical College.

(2) Surgical and Medical Registrars.

(3) Anaesthetist at the General Hospital.

(4) Assistant Surgeon in charge of the clinical laboratory at the General Hospital.

(5) Assistant Surgeons at the Tuberculosis Institute.

III. *Sub-assistant surgeons* (Rs. 30 per month)—

(1) Assistant Lecturers and Demonstrators.

(2) Sub-assistant surgeons at the Guindy Institute and the Tuberculosis Institute.

99. We would also suggest that the Surgeon-General be requested to state whether any additions to the list are necessary in accordance with the principle we have enunciated above. The allowances now drawn by these officers should be abolished, when they are placed on the enhanced scale.

100. *Civil Assistant Surgeon, Royapetta Hospital.* (Rs. 50 for two months).—This officer gets an allowance of Rs. 50 for two months for teaching the sub-assistant surgeons undergoing the post-graduate course. We have already recommended that a consolidated fee of Rs. 500 for the post-graduate course should be sanctioned. We suggest that this amount should be distributed by the Surgeon-General among the officers who do the teaching work. The allowance may therefore be abolished.

101. *Assistant Surgeon, Royapetta Hospital.*—This officer gets an allowance of Rs. 50 per month for the clinical teaching of Rayapuram medical students. We consider that clinical teaching should be part of a medical officer's duty and that this allowance should be abolished.

102. *Military Assistant Surgeon, Government House Dispensary.*—This officer gets an allowance of Rs. 50 for carrying out plague measures. The allowance was granted in 1904. Plague measures are no longer necessary, and we do not see any justification for the retention of this allowance which, we consider, should be abolished immediately.

103. *Allowances for instruction in first aid and stretcher drill.*—The military assistant surgeon at the Medical College is given an allowance of Rs. 100 for three months in the year for such instruction, and an assistant surgeon in the medical schools at Rayapuram, Tanjore, Madura, Calicut and Vizagapatam, also gets Rs. 20 per month for similar instruction. We have already suggested that these officers who are attached to the school or college should be placed on the enhanced scale, and we recommend that all these allowances should be abolished.

104. *District Medical and Sanitary Officer—Medical charge of a Central Jail.*—This allowance stands on a somewhat different footing from the allowance granted to a District Medical Officer who is Superintendent of a District Jail and is therefore in administrative charge of the jail. We recognize that the medical charge of a Central Jail involves a considerable amount of additional work for the District Medical and Sanitary Officer; but so long as the work of the medical officer does not exceed what may be expected of a Government servant and so long as the work is connected

with the profession to which the officer belongs, we do not think that an additional allowance should be granted. We, therefore, recommend that in the case of central jails, if there is no medical officer in administrative charge of that jail, an assistant surgeon should be appointed to be in subordinate medical charge of the jail. If this proposal is accepted, we recommend that the allowance now paid to District Medical and Sanitary Officers in charge of central jails may be abolished.

105. *Borstal Institute, Tanjore.*—The District Medical and Sanitary Officer, Tanjore, draws an allowance of Rs. 100 for being in medical charge of the Borstal Institute. We understand that the number of inmates in this jail is considerably less than in a central jail, and we do not consider that an assistant surgeon is necessary for the subordinate medical charge of this institution. We recommend that the allowance may be abolished.

106. *Indian Medical Service officers in administrative charge of central jails.*—We have considered the question whether any special allowance should be granted to Indian Medical Service officers when they are placed in administrative and medical charge of central jails. We recommend that in view of the greater responsibility devolving on these officers, they should be placed on an enhanced scale of pay, that is, the pay of an Indian Medical Service Civil Surgeon plus Rs. 150 a month. We further recommend that they should be required to pay house-rent for the quarters provided for them.

107. *District Medical and Sanitary Officer, Vizagapatam—For charge of Lunatic Asylum.*—Rs. 50.—Our remarks with regard to the Lunatic Asylum, Calicut, apply to this case, and we recommend that this allowance should be abolished.

108. *District Medical and Sanitary Officer, the Nilgiris—Rs. 50 as Consultant, Lawrence Memorial School.*—The District Medical and Sanitary Officer, the Nilgiris, is the consulting physician of the Lawrence School, Lovedale, situated about five miles from Ootacamund. This allowance of Rs. 50 is paid from the Memorial School Funds to which the Government contribute. If, as we presume, the District Medical and Sanitary Officer does not draw travelling allowance for his journeys to Lovedale, we consider that this allowance should be retained.

109. *District Medical and Sanitary Officer, the Nilgiris, for medical attendance on the Chitrali Prisoner.*—Rs. 15 a month.—This is paid by the Government of India. The allowance may be retained.

110. *Assistant Surgeon, Police Hospital, Vellore—First Aid lectures to Police school students.*—We do not see sufficient justification for this allowance of Rs. 30 a month, as the Assistant Surgeon is attached to the Police Hospital and his work is comparatively light. We consider that lectures in first aid should specifically be included amongst the duties attached to the post and that the allowance should be abolished.

111. *Assistant Surgeon, Municipal Hospital, Kodakūnal—Vaccination.*—Rs. 10 a month.—We have not been able to discover the justification for the extra allowance for vaccination work, which is purely a medical duty. We recommend that this allowance be immediately abolished.

(ii) Non-gazetted Officers.

112. We now proceed to deal with the allowances drawn by non-gazetted officers for specific additions to work.

113. *Sub-Assistant Surgeon, Police Hospital, Sivakasi.*—This officer receives an allowance of Rs. 10 for being in charge of the Local Fund Dispensary at Sivakasi. In 1902 a proposal to open a dispensary at Sivakasi was considered and abandoned, as the Local Board was unable to provide the funds required. Subsequently the Taluk Board agreed to provide the necessary funds by converting the Sattur Hospital into a dispensary. As the hospital was popular, the Government did not consider it advisable to convert it into a dispensary. In view, however, of the necessity for providing facilities for medical relief to the inhabitants of Sivakasi and of the inability of the Taluk Board to meet the entire cost of maintenance, the Government agreed to permit the sub-assistant surgeon attached to the Police Hospital to be in charge of the Local Fund Hospital. For this additional duty, the Taluk Board was paying an allowance of Rs. 10 to the sub-assistant surgeon. Sivakasi has now become a



municipality and, under the District Municipalities Act, it is one of the obligatory duties of every municipality to make adequate provision for the treatment of the sick poor within the municipality. We consider that the allowance of Rs. 10 now paid to the sub-assistant surgeon in charge of the Police Dispensary should be credited by the Municipal Council to provincial funds and that the question whether a separate Police Hospital at Sivakasi is necessary should be investigated in the Judicial Department.

114. *Sub-Assistant Surgeon, Cantonment Hospital, St. Thomas, Mount.*—This officer now gets an allowance of Rs. 10 for treating the Police sick and for sub-jail work. We consider that this allowance should be retained, but it should be paid to the Government of India as a contribution to salary and not to the Sub-Assistant Surgeon in charge of the Cantonment Hospital.

115. *Sub-Assistant Surgeon, Municipal Hospital, Cannanore.*—This officer gets an allowance of Rs. 10 for the additional charge of the Police Hospital. We understand that the Police Hospital is close to the Municipal Hospital, and we do not see sufficient justification for the payment of an extra allowance, which may be abolished.

116. *Compounder, Cantonment Hospital, St. Thomas' Mount—Sub-Jail and treatment of Police sick.—Rs. 5.*—Our recommendation as regards this allowance is the same as for the allowance given to the sub-assistant surgeon at the same place.

117. *Sub-Assistant Surgeon, Amindivi Dispensary.*—This officer gets an allowance of Rs. 10 for vaccination work in the islands. We do not see any justification for an allowance for vaccination work, but this allowance should be retained and transferred to Class V (Expensiveness of Locality).

118. *Sub-Assistant Surgeon, Residency Hospital, Travancore.*—This officer receives a local allowance of Rs. 10 from the Central Government. We do not see any reason to justify a local allowance at this place, and we recommend that it should be abolished.

119. *Senior Compounder, Ramachandrajetti, Headquarter Hospital, Tanjore.*—This compounder gets an allowance of Rs. 2 for sterilising instruments and dressing. There is obviously no necessity for an allowance for such work, and we recommend that it should be abolished.

120. *Gymnastics and Drill Instructor, Vizagapatam.*—The present incumbent of this appointment gets a duty allowance of Rs. 10 for additional work as an artist for the Medical School. We understand that although gymnastics and drill instructors are not ipso facto artists, a single man is very often employed in the two capacities in several educational institutions. We recommend that this allowance should be abolished; but the appointment should carry a consolidated pay as in the Education Department.

121. *Ward attendant, Lunatic Asylum, Waltair.*—This attendant gets an allowance of Rs. 2 for washing clothes. We consider that this should be abolished or transferred to contingencies if the allowance is really necessary.

122. *Gymnastic Instructor, Rayapuram Medical School.*—This instructor gets an allowance of Rs. 10 for clerical work connected with the hostel. Since the hostel duties cannot be considered to be the legitimate work of a gymnastic instructor, we consider that this allowance should be retained.

123. *Sub-Assistant Surgeon, Local Fund Dispensary, Tittagudi.*—The sub-assistant surgeon at Tittagudi has to visit the dispensary at Toludur twice a week to attend on the Public Works Department staff employed for the Toludur project. He receives a fixed travelling allowance of Rs. 10 and also a duty allowance of Rs. 20. We are not sure that a sub-assistant surgeon is at all necessary at Toludur, in view of the fact that the project has almost been completed. But if he is still considered necessary, we suggest that the allowance to the sub-assistant surgeon should be debited to the cost of the scheme. We also recommend that the sub-assistant surgeon be given a consolidated allowance to cover travelling expenses and the extra work involved.

124. *Sub-Assistant Surgeons at the Medical Schools at Rayapuram, Calicut, Tanjore, Madura and Vizagapatam.*—One of the sub-assistant surgeons at each of these institutions receives for three months in the year an allowance of Rs. 20 a

month for instruction in stretcher drill and first-aid. As we have already recommended in a similar case, we consider that this work should be recognized as part of the duties of the medical staff and this allowance should be abolished.

125. *Sub-assistant surgeon, Dugarajapatnam.*—This Local Fund officer gets an allowance of Rs. 10 for attending bi-weekly the dispensary at Armaghon. Since Government contribute a percentage of the salary of all Local Fund subordinates, we do not consider there is sufficient justification for the retention of this allowance. The officer may, however, be allowed a fixed travelling allowance.

126. *Sub-assistant surgeon, Kaval.*—This officer gets an allowance of Rs. 10 for visiting the criminal settlement. As we have noted, the Government pay a percentage of the salary of Local Fund officers for work connected with the Government. The allowance may therefore be abolished.

127. *Medical officer, Civil Debtors Jail.*—The appointment of Medical officer at the Civil Debtors Jail was at one time a whole-time appointment, and the officer received usually a jail allowance of Rs. 30 on the score of being debarred from private practice. The duty is now attached to one of the sub-assistant surgeons at the Rayapuram Hospital, and the allowance has been continued on account of the additional work. The Civil Debtors Jail is near the Rayapuram Hospital and no conveyance allowance is required; and the work is Government medical work, and we see no reason why it should not be recognized as the duty of one of the sub-assistant surgeons at Rayapuram Hospital. The allowance may be abolished.

128. *Sub-assistant surgeon, Police Hospital, Koraput.*—This officer is given an allowance of Rs. 10 for assisting the assistant surgeon in charge of the sub-jail. Since the assistant surgeon is in administrative charge of the jail, we do not think that this allowance for assisting him in his medical work can be justified. The allowance may therefore be abolished.

129. *Matron, Victoria Gosha Hospital—Rs. 30 for training nurse pupils.*—We consider that this should be recognized as part of the work of the matron and that the allowance should be abolished.

Class III. Allowances—Arduous or Dangerous.

(i) Gazetted Officers.

130. *Civil assistant surgeons, X-Ray work.*—There are two assistant surgeons at the General Hospital who are doing X-Ray work. One of them is also Assistant Professor of Surgery at the Medical College and draws a teaching allowance of Rs. 100 in that capacity. We understand that owing to the dangerous nature of X-Ray work, assistant surgeons are very reluctant to take up this work and that the Surgeon-General has addressed the Government for an increased allowance for officers in charge of X-Ray work. We, therefore, consider that this allowance should be retained and that it should be given to all assistant surgeons doing X-Ray work.

131. We have in this connexion considered the question as to what portion of the fees realized for private X-Ray work should be credited to the Government in consideration of the use of their apparatus. We understand that according to the arrangement with Captain Barnard, the officer in charge of the X-Ray Institute, he is allowed to take 96 per cent of the fees collected from private patients. At our instance, the matter was further considered by the Superintendent of the General Hospital in consultation with Captain Barnard, and the latter has agreed that 25 per cent of the fees collected may be credited to the Government. We recommend the adoption of this proposal.

132. *Assistant surgeon, Leper Hospital.*—This officer gets an allowance of Rs. 100 per month for work at the Leper Hospital. Although this work is not dangerous, it is obviously unpleasant and not altogether devoid of risk. We consider that the present allowance of Rs. 100 should be retained.

133. *Civil assistant surgeons in subordinate charge of Lunatic Asylums.*—There are at present three assistant surgeons employed in Lunatic Asylums. One is the Deputy Superintendent of Lunatic Asylum, Madras, who is a military assistant surgeon and receives a special remuneration as Deputy Superintendent. We have already dealt with his case. The other two assistant surgeons, one stationed in Madras and the other at Calicut, draw an asylum allowance of Rs. 30 in addition to

their charge allowance of Rs. 30. We doubt if work at the Lunatic Asylum can be described as arduous or dangerous, but it is obviously disagreeable and we recognize that, if no extra allowance is given, it might be difficult to recruit officers for these posts. We therefore recommend that these two assistant surgeons should get a consolidated allowance of Rs. 50 and that they should not be entitled to any other allowance. They should also be charged rent for the houses they are required to occupy.

(ii) Non-Gazetted Officers.

134. *Sub-assistant surgeon, Leper Hospital.*—We recommend that this officer should continue to get an allowance of Rs. 50 a month, but he should be required to pay rent for the quarters provided.

135. *Compounder and ward attendants, Leper Hospital.*—The compounder gets an allowance of Rs. 5 and each of the ward attendants also gets Rs. 3 owing to the unpleasant nature of the work. We consider that these allowances should also be retained, but house-rent should be charged for the quarters provided.

136. *Sub-assistant surgeons, Lunatic Asylum.*—These officers in Madras and Vizagapatam get an allowance of Rs. 50, as they are debarred from private practice and also as the work is unpleasant. We consider that the allowance should be retained but it should be reduced to Rs. 30. The sub-assistant surgeons should be required to pay house-rent for the quarters provided.

137. *Compounders, Lunatic Asylum, Madras, Calicut, Vizagapatam—Rs. 5 per month.*—It is not obvious to us how the compounders of Lunatic Asylums are exposed to any risk, and we do not see any justification for these allowances as the work is neither dangerous nor arduous. We recommend that this allowance should be abolished.

138. *Sub-assistant surgeons on epidemic duty.*—These officers are entitled to an allowance of Rs. 50 per month when they are appointed Plague Inspectors or when they are on plague, cholera, epidemic and festival duty. We do not consider that these duties are either arduous or more dangerous than other medical work, and we recommend that the allowance be abolished.

139. *Sub-assistant surgeons doing plague work.*—These officers get an allowance not exceeding one-fifth of their salary when they are doing plague work in addition to their ordinary duties. Plague and inoculation work should be recognized as a part of a medical officer's duty, and we do not consider that a separate allowance for this duty can be justified. We recommend that this allowance may be abolished.

140. Nurses and midwives are also entitled to a similar allowance for the same reasons. We suggest that this allowance should also be abolished.

141. *Sanitary Inspectors, Cholera parties—Risk allowance of Rs. 10.*—The cholera parties have all been disbanded and the sanitary inspectors attached to these parties now form part of the District Health Staff. We understand that the risk allowances paid to these officers have already been abolished.

Classes IV and V. Allowances—Unhealthy and expensive localities.

142. In Appendix F we give a list of allowances drawn by medical officers employed in unhealthy and expensive localities. We understand that the general Retrenchment Committee have laid down a scale according to which allowances in unhealthy and expensive localities may be granted in all departments. Since the recommendation of the general Retrenchment Committee will apply also to medical officers, we do not propose to make separate recommendations. We, however, consider that, so far as the Presidency town is concerned, the Surgeon-General should be requested to submit to the Government for approval a list of the medical appointments the holder of which should be definitely debarred from private practice and should be given a Presidency allowance.

Class VII.—Conveyance Allowance.

(i) Gazetted Officers.

143. *District Medical and Sanitary Officer, South Arcot.*—This officer gets a conveyance allowance of Rs. 25 for visiting the jail. We understand that the

general Retrenchment Committee have decided to confine conveyance allowance to cases in which the officers are expected or required to use a particular type of conveyance. We do not see sufficient justification for a conveyance allowance in this case; but if the jail is at a considerable distance from the headquarters of the officer, a fixed travelling allowance may be sanctioned.

144. *Assistant surgeon, 3rd District.*—This officer gets a conveyance allowance of Rs. 45 per month for attending the Civil Orphan Asylum. We have already suggested the abolition of this appointment and the payment of a motor-cycle allowance of Rs. 25 to an assistant surgeon to be attached to the Rayapuram Hospital.

145. *Lady assistant surgeon, Maternity Hospital.*—This lady gets a conveyance allowance of Rs. 30 for visiting the sick in paracheris. We have considered the possibility of entrusting the work to the maternity and child welfare association, but we understand that the association cannot take up the work. We, therefore, recommend that the allowance be retained.

(ii) Non-Gazetted Officers.

146. *Sub-assistant surgeon, Municipal Hospital, Cannanore.*—This officer gets a cycle allowance of Rs. 5 for being in charge of the Police Hospital at the same place. We understand that the Municipal Hospital is close to the Police Hospital, and we do not see sufficient justification for a cycle allowance, which may be abolished.

147. *Conveyance allowance paid to plague inspectors, sub-assistant surgeons on famine duty or plague duty, temporary plague inspectors and others.*—These officers are all paid a conveyance allowance, the amount varying with the nature of conveyance used. We consider that all these allowances should be abolished and that a fixed travelling allowance sanctioned instead, if necessary, after an examination of each case on its merits.

Class VIII.—Allowances for Special Qualifications.

148. A list of allowances drawn by medical officers for special language qualification is given in Appendix (G). We consider that no allowance should be given for language qualifications but suitable rewards should be given for passing examinations in Oriya, Khond and Savara.

Class IX.—General.

149. *House-rent allowance.*—In Appendix H is given a long list of gazetted and non-gazetted officers who receive either house-rent allowances or free quarters. We do not consider that either free quarters or house-rent allowances should be allowed to any officers of the medical department except house physicians and surgeons and the nursing staff. Nurses are given free quarters throughout the British Empire and the terms of service on which nurses are engaged are always understood to include the provision of free quarters. We therefore consider that no rent should be charged for quarters provided for the matrons and nurses, whether European or Indian, and that this fact should be taken into consideration in fixing the pay of the nursing staff. House physicians and house surgeons are all honorary at present, and even if our proposal in the last chapter is accepted, they will only get a ration allowance of Rs. 50 a month. Unless free quarters are provided, it is not likely that many will volunteer for such work.

150. Sub-assistant surgeons have enjoyed the privilege of free quarters or have been granted house-rent allowances ever since 1894. The allowances or quarters are provided by local bodies in the case of officers employed under them. The allowances have also been subject to the condition that the officer provided himself with quarters within a convenient distance of his duties and approved by the authority under whom he has been serving. Thus the main justification originally for the allowance was the fact that the officers were required to live close to their work. When revising the scale of pay of these officers in 1910, the Government, however, extended this concession to officers not holding sanctioned appointments in order to popularize the service.

151. The pay of sub-assistant surgeons has undergone revision on several occasions since 1894, as shown in the statement below :—

Year.	1894.	1901.	1910.	1916.	1918.	1921.
Grades of pay.	Rs. 25 35 55	Rs. 25 35 45 55 70	Rs. 30 40 50 60 70 80	Rs. 30 45 55 65 80 100	Rs. 50 55 60 65 70 75 80 90 100 110 120	Rs. 75—5—175—200

It will be observed that the pay has been very substantially raised; the initial as well as the maximum pay has been doubled since 1916 and sub-assistant surgeons are also eligible for appointments in the assistant surgeons' grade, and we do not see sufficient justification for retention of this allowance. We understand that in some cases the quarters provided by the local bodies for sub-assistant surgeons are at a considerable distance from the hospital. We agree, however, that it would be desirable to have the doctor close to the hospital, and we recommend that quarters should be provided for all sub-assistant surgeons subject to payment of rent. The allowance may be immediately abolished.

Class XI.—Travelling Allowance.

152. *Vaccinators and Deputy Inspectors of Vaccination.*—We consider that the fixed allowance of Rs. 10 now paid to vaccinators may be retained. As regards deputy inspectors who are now designated district health inspectors, we understand that the Government have already dealt with this allowance, and we have no recommendation to make.

Class XIII.—Private Practice.

(i) *Gazetted Officers.*

153. *The Resident Medical Officer, Rayapuram Hospital.*—This officer gets an allowance of Rs. 100 as lecturer in the medical school, Rs. 30 as hospital allowance and Rs. 70 as duty allowance. He is also entitled to free quarters. We recommend that he should get a consolidated addition to pay of Rs. 150 a month for all the work that he is doing now. He should receive no other allowance and should be charged rent for the quarters he is required to occupy. He should also be debarred from private practice.

154. *Resident Medical Officer, Maternity Hospital.*—This officer, who is a military assistant surgeon, gets an allowance of Rs. 100 as Assistant Professor, Medical College, and a duty allowance of Rs. 70 as a Resident Medical Officer and also an allowance of Rs. 50 for training Anglo-Indian midwives. He is also entitled to free quarters. We recommend that he should be paid a consolidated allowance of Rs. 100 per month for all the work that he is now entrusted with. He should pay house-rent for the quarters provided, and he should also be debarred from private practice. He should not be given any other allowance.

155. *Resident Medical Officer, Ophthalmic Hospital.*—Our recommendation as regards this officer is the same as for the Resident Medical Officer, Maternity Hospital.

156. *Civil assistant surgeon on statistical duty, Surgeon-General's office.*—This officer is employed for six months in the year and gets an allowance of Rs. 50 as compensation for loss of opportunity for private practice. We have already suggested the abolition of this appointment, we do not therefore make any recommendation as regards this allowance.

157. *Civil surgeons and assistant surgeons at the Guindy Institute.*—These officers get an allowance of Rs. 100 or Rs. 150 according to the length of service partly because they belong to a specialist department, and partly because their private practice has been restricted to bacteriological cases. We have already suggested that, since these officers are specially selected men, they should be placed on the enhanced scale. The allowance now paid may be abolished when the enhanced scale of pay is introduced.

158. *Civil surgeons and assistant surgeons under the Chemical Examiner.*—We consider that these officers should be on the enhanced scale of pay and that they should be entitled to the Presidency allowance sanctioned for all officers in this city. They should however be definitely debarred from private medical practice.

159. *Itinerating dispensaries.*—Officers in charge of these dispensaries are now granted an allowance of Rs. 50 in addition to the usual charge allowance on account of their being debarred from private practice. We do not see sufficient justification for the prohibition of private practice in the case of medical officers in charge of such dispensaries, and we consider that this allowance should be abolished and that these officers should be paid a fixed travelling allowance, to be determined in each case with reference to local circumstances.

160. *Military assistant surgeon, Lawrence Memorial School, Lovedale.*—This officer is entitled to an allowance of Rs. 50 for loss of private practice. We consider that this allowance should be abolished and that the Military Assistant Surgeon should be allowed to have private practice.

161. *Military assistant surgeon, Alipuram Jail (Bellary district).*—This officer gets an allowance of Rs. 200 for loss of private practice. We understand that medical officers on jail duty are to be allowed consulting practice, and we do not see sufficient justification for the grant of an allowance of Rs. 200 as compensation for loss of private practice. If it is given for the responsible nature of the work it should be definitely recognized as such, and it should not be classed as a 'private practice' allowance.

(ii) *Non-gazetted Officers.*

162. In Appendix K is given a list of sub-assistant surgeons who draw a jail allowance of Rs. 30 as compensation for loss of private practice. We understand that it has been recently decided to allow them to have consulting practice and that jail duty or service in unpopular stations is an incident in the career of every sub-assistant surgeon. No compensatory allowance has been given or will ever be given for service in a station where scope for private practice is restricted, not on account of the personal qualifications of an individual officer, but on account of local circumstances such as the poverty of the people, etc. In both cases, the restriction of private practice is due to the action of the Government; in the one case, to the posting of an officer to a particular duty and in the other to the posting of the officer to a particular station. We consider that there is as little justification for an allowance for jail duty as there is for service in unpopular stations. We recommend, therefore, that this allowance should be abolished.

163. *Sub-assistant surgeons in charge of itinerating dispensaries.*—As in the case of assistant surgeons we recommended that the compensatory allowance these officers get should be abolished and that they should be allowed to have private practice.

164. *Sub-assistant-surgeon attached to the Chenchu Officer, Atmakur—Rs. 50.*—We consider that this allowance which is really granted on account of the unhealthy nature of the locality should be retained but that it should be included in class IV—Unhealthy localities. The actual amount should be that recommended by the General Retrenchment Committee for unhealthy localities.

165. *Sub-assistant surgeons in connexion with the anti-hookworm campaign, Madras.*—These officers who are three in number get an allowance of Rs. 50 each for loss of opportunity for private practice. Since they are not definitely debarred from private practice, we recommend that this allowance should be abolished.

166. *Sub-assistant surgeons attached to the Pasteur Institute.*—These officers get an allowance of Rs. 30 as compensation for loss of private practice and also draw a local allowance of Rs. 10. Since they are not debarred from private practice the compensatory allowance should, we consider, be abolished.

167. *Sub-assistant surgeon attached to the Forest College.*—This officer gets an allowance of Rs. 50 for loss of private practice. We have already recommended that this should not be recognised as sufficient justification for an allowance unless the officer has been definitely debarred from private practice, and we recommend that it should be abolished, as also a similar allowance which, we understand, is paid to the sub-assistant surgeon attached to the Engineering College at Guindy.

Class XIV.—Miscellaneous.

(i) *Gazetted Officers.*

168. *Dr. O'Brien Beadon.*—This lady, who is the Superintendent of the Victoria Hospital, Triplicane, gets a personal allowance of Rs. 500. We understand that this allowance is given to the present Superintendent of the hospital since her services are required for the Medical School for women to be started in July next and since she would actually be getting this pay had she continued as Superintendent of the Agra Medical School. We therefore recommend that it should be retained.

(ii) *Non-Gazetted Officers.*

169. *Private sub-assistant surgeons employed for temporary duty.*—These are granted 25 per cent in addition to the grade pay of sub-assistant surgeons, on account of the temporary nature of their appointment. We consider that there is no sufficient justification for the grant of this additional pay and recommend that it should be abolished.

170. *District Board Medical Storekeeper, Vizagapatam.*—We understand that the Vizagapatam District Board employs a compounder for the charge of the reserve stock of medicines required for local fund medical institutions. The services of this compounder are also utilized for the Government headquarter hospital at Vizagapatam, and he is paid an allowance of Rs. 15 a month from provincial revenues. No other district board employs a separate compounder for keeping the stock of medicines, and we do not see any necessity for the retention of this appointment at Vizagapatam. We recommend that the appointment should be abolished immediately.

171. *Ration and uniform allowances.*—We recommend that these allowances should be continued to the members of the nursing staffs of Government hospitals, but at slightly revised rates as shown below :—

	Ration allowance.		Uniform allowance.
	Presidency town. Per mensem.	Mufassal. Per mensem.	
	RS.	RS.	RS.
Matrons and sisters	25	20	100
Nurses—Europeans and Anglo-Indians...	25	20	75
Do. Indians	15	15	75
Pupil nurses—Europeans and Anglo-Indians	25	...	50
Pupil nurses—Indians	15	15	50

A. Y. G. CAMPBELL.
T. DESIKACHARI.
(Subject to a note.)

H. A. WATSON.
A. J. H. RUSSELL.
P. ETHIRAJULU NAYUDU.
(Subject to a note of dissent.)

T. H. SYMONS.
K. NEDUNGADI.
B. RAMA RAU.

OOTACAMUND,
11th June 1923.

MINUTE OF DISSENT BY SIR T. DESIKACHARIYAR.

I have to add this note to the recommendation in paragraphs 10 to 12 of the Committee's report, though at the meeting of the Committee held on the 27th February 1923 I did advocate the constitution of the District Health Board with the Collector as its Chairman. Since then I have had occasion to examine this matter afresh, and I am inclined now to the view that the President of the District Board and not the Collector should be the Chairman of the Health Board and that the latter should be entrusted with the executive control over the Health staff newly employed in each district.

2. It is no doubt true that the help and co-operation of the subordinate Revenue officials and the Police who are subordinate to the Collector and District Magistrate, are needed for the adoption of preventive and remedial measures in connexion with the work of the Public Health staff. At the same time, it must be borne in mind that the promotion of public health and sanitation and the discharge of the duties set out in paragraph 6 of the report are essentially those of local bodies, and local boards are bearing from local rates a proportion of the expenditure for services rendered by them along with the Provincial Government who pay their share from the General Revenue.

3. It is urged that district boards have discharged their duties on the whole, well, and it is not desirable that anything should be done which is calculated to create an impression that their presidents are being superseded by Collectors, by means of the arrangement suggested in paragraph 10 of the report. The argument that hitherto deputy inspectors of vaccination were paid from the public revenues or that the control of them and of cholera parties was in a great measure with the Sanitary Commissioner is of no direct measure bearing on the problem for solution.

4. The Collector at present controls only the measures adopted for the prevention and spread of plague. But this could be quite as well effected by the district board being directed to co-operate with the Collector, in the employment of the Health staff for plague purposes. I do not see why plague should be treated differently from cholera, smallpox, or relapsing fever now that evacuation, disinfection and inoculation are the only expedients thought of to combat with the epidemic.

5. The help and co-operation of the subordinate Revenue officials and the Police may be made available to the Health Board by administrative orders issued by Collectors and District Magistrates. If the Collector be made a member of the Health Board, responsible for shaping its policy, it must be easy to enforce the prompt obedience of revenue subordinates to the orders of the Chairman of the Health Board be he the President of the District Board or anybody else.

6. The area under the control of the local boards must be obviously very much larger than the area within the jurisdiction of all the municipalities put together in each district. The Collector and District Magistrate has now nothing to do with medical aid, sanitation or vaccination, arrangements at fairs and festivals and propaganda work, and he is only vested with powers where the control of plague is concerned. If the policy of the Government is to associate non-official agency in ever increasing degree in the administration of local affairs for the progressive realization of responsibility nothing would be more consonant with that policy than to place the President of the District Board at the head of the Health Board.

7. In the practical working of the existing plague rules I experienced no difficulty in the deputation of the District Health Officer at the instance of the Collector for plague work or at the instance of the Director of Public Health for work in a Municipality which had no Health Officer of its own. As District Board President I placed the Health establishment in my district at the disposal of the Collector who appointed the District Health Officer as Special Plague Officer. Likewise the Health Staff was directed by me to work in the Srirangam Municipality during the last Ekadasi festival. There was no hitch whatever and there is absolutely no reason why such co-operation should not be within the range of practical politics throughout the Presidency.

8. If village officers are enjoined to co-operate with the Health staff and discharge their duties in recording vital statistics, the promotion of rural sanitation and the

adopting of measures for combating epidemics, there need be in practice no difficulty in the enforcement of their duties by the mere fact that they are subordinate to the Collector. The fact that a large non-official agency has taken over the work of Collectors and Divisional Officers could afford no just grounds for the Revenue subordinates refraining from performing services which they were rendering when they were working under Collectors or Revenue Divisional Officers as District and Taluk Board Presidents.

9. The Local Boards Act studiously eliminated the executive control of Collectors and Divisional Officers from the administration of local affairs and it would be going back on the policy of the statute to now introduce the official element in departments of activity entrusted to local bodies.

10. I am not unalive to the difficulties which in existing conditions beset the administration of local affairs by non-official agency, as such agency has at every turn looked forward for help to the Collector and District Magistrate and his subordinates. But the difficulties are by no means insuperable.

11. If Collectors and District Magistrates serve on the Health Board and sympathise and co-operate with local bodies, there could be no lack of efficiency by the executive control over the Health staff being vested in the President of the District Board nor need there be a larger Health staff than now to carry on the work. On the other hand, it is likely to create an impression that the Health Board is another body created in each district to belittle the prestige and narrow the scope of usefulness of non-official presidents of local boards, if the Collector is appointed as the Chairman of the Health Board.

T. DESIKACHARI.

MINUTE OF DISSENT BY MR. P. C. ETHIRAJULU NAYUDU.

[Note.—The following minute by Mr. P. C. Ethirajulu Nayudu was received four days after the report had been adopted and signed. As some of the suggestions in the minute had not been made earlier by Mr. Ethirajulu Nayudu, he was informed that it might be necessary to have a meeting of the Committee to consider them, but he has replied that this is unnecessary.]

With reference to the report of the Retrenchment Committee for the Medical and Public Health Departments appointed under G.O. No. 250 P.H., dated 9th February, 1923, I have the honour to submit the following separate note about the proposal raised therein.

2. *Allowance.*—I agree generally with the Committee regarding the abolition of the allowances hitherto granted to Civil Assistant Surgeons and Sub-Assistant Surgeons. I, however, think that the question of reduction or abolition of teaching allowance should be considered more carefully and if there is likely to be any loss of efficiency from suitable candidates not coming forward to take up these appointments willingly, I think the allowances need not be reduced. I understand that lecturers of Medical Schools were drawing a teaching allowance of Rs. 100 and a charge allowance of Rs. 30, i.e., Rs. 130 per mensem. As the charge allowances for all civil assistant surgeons has been abolished, the reduction of the teaching allowance to Rs. 70 is not called for. I do not think there is any necessity to curtail their scope for private practice, as these men being specialists in their particular subjects, would be useful to the general public and their services, if available, should not be denied to the public. As there is no such restriction in the case of Professors of the Medical College, I fail to see any need for it in the case of lecturers of Medical School.

3. The allowance of Rs. 100 to Rs. 150 hitherto drawn by civil assistant surgeons who were acting in appointments held by Indian Medical Service officers has been abolished and I think for a similar reason the allowance drawn by civil surgeons in the Bacteriological Department should also be abolished.

4. *Leave reserve.*—It is surprising to note that there were over 100 sub-assistant surgeons on reserve duty who had no substantive post to hold. The leave reserve should be curtailed to 10 per cent of the sanctioned cadre and I think the reduction should be done by retiring officers who have put in 25 to 30 years of service.

5. *Abolition of certain appointments in the General Hospital.*—I regret I am unable to agree to this proposal of the Committee. The economy that may result from such a proposal is but a trifle, but the loss of efficiency will be great. The General Hospital is about the largest of its kind in this Presidency and it is necessary to maintain it at a high level of efficiency and as a model for District Centres. To propose to run it with freshly passed out medical graduates and a set of Consulting Surgeons and Physicians seems to me to be a retrograde proposal not calculated to safeguard the satisfactory working of this institution. As I understand it, the Surgeons and Physicians of the Hospital work between 10 a.m. and 1 p.m., and a very large amount of the routine work is entrusted to the Assistant Surgeons of the different wards. The Officers in charge do not visit their cases in the evening nor are they generally available at other hours. In fact they fill the role of Consultants and have hitherto depended upon the Assistant Surgeons for carrying out the details of the treatment. To entrust this work to young and freshly passed out graduates does not certainly appeal to a lay mind.

6. The argument that there is always a medical officer resident who can be called in consultation does not seem to solve the difficulty. The Resident Medical Officer will generally be a junior officer probably freshly recruited to the Civil and it is no reflection on his professional attainment to say that it is hardly likely he will be in a position to understand the needs of the large number of cases or to attend to both surgical and medical cases.

7. The House Surgeons themselves would be glad to have the assistance of the Assistant Surgeons in the discharge of their duties, and while I certainly agree that these House Surgeons should be given greater facilities for practical training, I think there is need for supervision and help in the interests of the patients.

8. I also am of opinion that in a training centre where a large number of medical students are passing through every year, the need for experienced medical men to guide these young men is obvious. The clinical training is given by the Professors but much of the routine work and details have to be learnt through the Assistant Surgeons and from the students' point of view it would obviously be a mistake to abolish these posts.

9. This raises the very important question of medical education in this country. The Committee have not gone into this question, but I think there is a *prima facie* case for enquiry, and I would earnestly commend the need for such an enquiry to the notice of the Government. The Madras Medical College has been in existence for nearly seventy years, and I believe that the College has been sending its *alumni* as medical graduates for well nigh forty years. It is not a little surprising that in spite of this long period of its existence it should be necessary for our young men to go to other countries for specializing in different branches of Medical Science, while from all accounts there is scope here for such work to be carried on. So far as I understand there is but the ordinary instruction for general qualifications and no specialization has been attempted. Thus various branches like Diseases of Nose, Ear, Throat, Mental Diseases, Dentistry, etc., there is no scope for young men to specialize and this is a subject well worth full enquiry. As a lay man I can only suggest that a Committee should be immediately appointed on which there would be representatives of the College, University and Private Medical Practitioners who will report on the possibilities and the mode of starting these post-graduate courses and specialized studies. If this suggestion be considered by the Government sympathetically, they would be convinced that far from abolishing these Assistant Surgeons from the General Hospital there is need for increase and what is wanted seems to me to utilize them to the fullest advantage. A criticism has been passed by some of the Professors of the College themselves and my attention was drawn some time ago to a contribution in a medical journal that compared with British and particularly American universities the proportion of teachers to students in the Madras Medical College is disproportionately small. I do not see how consistently with such opinions it could now be suggested that these posts in a teaching centre could be abolished. Really the craze for economy should be tempered with the need for efficiency.

10. *Honorary Surgeons and Physicians.*—Ten years ago the Government tried this scheme but gave it up for reasons which it would be futile to discuss at present. Considering the shortage of Medical staff in the Hospital I think the scheme can well be tried, and selected Medical Practitioners taken on as Honorary Surgeons and

Physicians and given responsible work with same amount of clinical teaching. I agree that these should be persons with high academic qualifications and professional skill. Perhaps the best way to associate honorary workers with the Hospitals would be to entertain specialists to fill in the gaps that are now unfilled. Thus special departments could be opened in the general hospitals with their help and they could be utilized in the scheme of post-graduate study I have outlined above.

11. *Fees earned for private work.*—It is curious that medical officers in charge of Government institutions should be given facilities to earn from private practice during their official hours of work and with all the aid of the Government behind. Moreover I understand that at the King Institute, Guindy, and the X-ray department of the General Hospital, 96 per cent of the fees collected is taken by the Medical Officers and their establishment, while a paltry 4 per cent is credited to the Government. I do not know who is responsible for such an arrangement, but it seems to me that the system is iniquitous. It has the evils of a State subsidy with the additional disadvantage that it gives a scope for neglect of legitimate work for the sake of the private practice. It is absurd to suppose that in the X-ray department for instance, the use of the X-ray apparatus, the electric consumption, the use of photographic plates, the developing media and the prints would all come to only 4 per cent of the amount collected, while 96 per cent would be needed to recompense the labour involved. To my mind it seems pretty plain that the Government have lost heavily in the past in magnanimity to provide for facilities for private practice to the officers concerned. Similarly at the King Institute I must confess to my inability to believe that 4 per cent represents the cost of material utilized. And if it is, is it an act of grace or of charity by which this sum of 4 per cent is credited to the Government? Apart from these absurdities, there is this additional fact to be borne in mind that so long as this unfair State subsidy is allowed, the private practitioner has got a legitimate grievance, and his attempts at starting private institutions are bound to failure. I have no hesitation therefore in condemning the whole system and think it should be abolished at once. If this is impossible at present, I would suggest strongly that 90 per cent of the fees collected should be credited to the Government. The very plausible argument may be urged that the general public might suffer. I am not so easily convinced of these shibboleths, for I find already private enterprise come into the field, and if Government should only take a firm stand, the demand will be fully satisfied by some of the officers in these departments opening their laboratories and X-ray plants in the immediate future. I trust the Government will look into this matter carefully.

12. *Transfer of Medical Officers.*—There has been a general complaint that medical officers are transferred too frequently and to long distances and a great deal of economy could be effected by curtailment of such transfers. I think the arrangement by which the Presidency is mapped out in four or five areas probably on a linguistic basis and Medical Officers posted to one of these areas would meet with the requirements of the situation. Specialists could of course be transferred wherever their services be needed, but the general practitioners who form the majority may choose the circles and be subject to transfers within the circles ordinarily. I would also encourage the system of mutual transfer at the cost of the individual concerned.

13. *Medical Districts in the City: I district.*—There is no necessity for a separate Sub-Assistant Surgeon only doing office work. The post should be abolished and the work can easily be managed as in the IV district by one of the staff in Royapuram. There are no less than eleven Assistant Surgeons and eighteen Sub-Assistant Surgeons, and it is surprising that a Sub-Assistant Surgeon should have been retained so long for doing only office work.

14. *Second and third districts.*—I cannot agree to the suggestion that the work of these two districts should be transferred to the first and fourth districts and that a Civil Assistant Surgeon should be attached to the Royapetta Hospital to do the work of the district and Civil Orphan Asylum. The District Surgeons of the first and fourth districts are already overworked and I think it is unfair to add to their burdens further. The Surgeon, First District, for instance, has multifarious duties to perform. He is the Surgeon for a large area, is the Superintendent of the Government Rayapuram Hospital, of the Raja Sir Ramaswami Lying-in-hospital—two big institutions in the north of the city. He is besides the Superintendent of the

largest Medical School in India, is Medical Inspector of Immigrants, has to superintend over the Monegar Choultry and has a number of miscellaneous duties to perform. In fact his work is so voluminous that there is room for considering whether he should not be relieved of some of these responsibilities and under these circumstances I do not think it is just on the part of the Government to increase it. Similarly the Superintendent of the Royapetta hospital has enough to look after. I propose that the second and third districts may be amalgamated into one district under the second district surgeon and treated in the mill area. The following staff may be sanctioned—

(1) One civil assistant surgeon,

(2) One clerk-typist, two peons and one sweeper.

By so doing one civil assistant surgeon pay, house-rent, etc., can be saved.

15. *Mufassal.*—Small dispensaries in the mufassal should be made centres of medical work for a distance of at least ten miles around them, the medical officers in charge being made to tour this distance on definite days in the week to render medical aid to villages within this distance. Every taluk headquarters must have a hospital fully equipped and maintained by the Government.

16. *Military Assistant Surgeons.*—This class of officers are primarily recruited for the Army from a body of men who have general and professional qualifications inferior to those possessed by the University graduates. Whatever might have been the reasons in the past there seems little justification to continue this practice at present. While the sanctioned strength is only twenty-one there are at present nearly twenty-eight men employed in this Presidency. It is not known under whose authority or for what reason these extra men were drafted. When scores of medical graduates who have for five and six years done good military service are being summarily given notice of discharge, it is manifestly unfair that the local Government should go abegging to the Government of India for men with inferior qualifications and pay them actually Rs. 100 on an average more than for the civil men. Obviously the local Government is under no obligation to entertain these men as in the case of the Indian Medical Service officer. I think prima facie there is a strong case for stopping this practice altogether.

17. In the interests of efficiency I also hold that these men should not be posted to teaching institutions and to responsible posts in the State hospitals in the city. The present paradox where military assistant surgeons hold all the best posts in the city hospitals open to the assistant surgeons' cadre must cease. For teaching appointment only those with the highest qualifications should be chosen.

18. *General.*—Local bodies should be given the option of—

(1) Employing their own staff required for their dispensaries.

(2) They should be allowed to open ayurvedic or unani dispensaries within their area.

(3) They should also be given the liberty to indent for medicines and surgical instruments required for their institutions on tender system.

19. I may perhaps conclude by stating that the inquiry of the committee was far too limited to go into any large question of policy fully. There is scope for further enquiry into the following question:—

(1) The re-organisation and improvement of medical education.

(2) The administration of State hospitals.

(3) The extension of medical relief in the mufassal and the system of working of itinerating and travelling dispensaries.

(4) The re-organisation of the medical staff in various dispensaries and hospitals. I have only touched on a few of the subjects dealt with by the committee. Were it not that the order definitely stated that the committee will not deal with the scales of pay or strength of the cadre of the Indian Medical Services, I should have been tempted to give my views on the subject. Still as the subject has been discussed to some extent in the local Council, I trust the Government is not unaware to the views of the non-official body with regard to this question.

20. *Hospital contracts.*—I consider the system which permits of such serious variations in the contract rates for diet articles at the different hospitals in the city is certainly defective. The market prices do not fluctuate in the different parts of the city and therefore it should be possible to get an uniform rate for different

articles. I therefore agree to the proposal of the committee that so far as the main articles of diet are concerned, the Surgeon-General should in future contract for all Presidency hospitals for each article separately.

21. I also agree that it is very desirable to appoint a senior Deputy Collector to see that the contractors supply the necessary articles and to control, inspect and supervise the internal economy in general. He would be the supervising officer of the Stewards' departments in the various hospitals and may report to the Surgeon-General whenever he thinks it necessary. I would however suggest that this officer should be directly responsible to the Government working through the Secretariat and not as suggested by the committee responsible to the Surgeon-General. In any case it should be clearly understood that he is not a subordinate officer to any of the officers in charge of the various State hospitals.

22. In case concerning supply of Government hospitals in the mufassal I would suggest that a committee comprising the District Medical and Sanitary Officer, chairman of his headquarter municipality, president, district board and the Collector of the district be appointed to select the contractors and approve the tenders and to supervise occasionally about the quality and quantity of articles supplied to the Headquarter Government hospital.

23. *The reorganization of medical relief.*—This should have formed the most important point of discussion with the committee and although we have been fully alive to the need for such a discussion, it has not been possible to collect the evidence or examine the necessary witnesses to enable us to arrive at a definite conclusion. With this handicap I may be privileged to place my view before the Government for their consideration.

The points that suggest themselves for consideration are—

- (1) The substitution of the Provincial officers for Imperial Service officers.
- (2) The substitution of an honorary staff for a paid staff.
- (3) The substitution of sub-assistant surgeons for civil assistant surgeons.
- (4) The employment of local medical men by district boards and municipalities in place of Government medical men.
- (5) The employment of honorary workers to mufassal dispensaries.
- (6) The opening of ayurvedic and unani dispensaries in villages.

24. So far as the first proposal is concerned the terms of reference preclude my discussing it here but I understand recommendations have already been sent to the Government of India to throw open some of these places hitherto reserved for Indian Medical Service officers to provincial men. I have already adverted to the employment of honorary staff in the State hospitals in the city but it is a little premature at present to suggest that they should replace the permanent staff. So far as the other proposals are concerned. I think it is necessary that a list of stations should be drawn up where important hospitals exist and these should be well equipped and taken over by the Government. The institutions being run by the Government as District headquarters hospitals are at present.

25. With regard to all other institutions I would suggest they be classified as class A or B institutions—class A being institutions where either of their importance as a pilgrim centre or their unfavourable locality or for other reasons it is desirable that the institutions should run as at present by the local body concerned, the Government providing the necessary funds and the Medical Officer as well—class B are institutions which can be left entirely to the management of local bodies and they may make their own arrangements about recruiting the medical staff, etc., but subject to inspection by the District Medical Officer from time to time so far as the professional part of it is concerned.

26. The district boards may encourage medical practitioners to settle down and open new dispensaries in villages, the cost of running the dispensary being met by the district board and the medical practitioner offering his services honorary under some safeguards. I am also strongly of opinion that to provide medical relief to remote village parts, the district boards should open ayurvedic or unani dispensaries.

APPENDIX A.

ESTIMATE OF SAVINGS.

(A)—*Savings due to retrenchments effected by the department before the constitution of the Committee.*

	Per annum— RS.
1. Abolition of the system of paid house surgeons and physicians ...	26,580
2. Reduction of the menial staff in the Medical Department ...	2,334
3. Abolition of the Stone House Hill dispensary ...	4,800
4. Abolition of stipends in Medical schools ...	88,200
5. Abolition of the third year class in the Calicut Medical school ...	11,520
6. Discontinuance of admissions to the Lady Apothecary class in the Madras Medical College ...	18,000
Total ...	1,51,434

(B)—*Estimate of savings that will result from the Committee's proposals if accepted.*

	Per annum— RS.
I.—THE PUBLIC HEALTH DEPARTMENT.	
1. Reorganization of the Public Health staff (roughly) ...	50,000
2. Abolition of two appointments of Assistant Directors of Public Health.	36,000
3. Revision of the scale of pay of Health Officers ...	40,000
4 Do. do. District Health Inspectors ...	24,600
II.—THE MEDICAL DEPARTMENT.	
5. Abolition of the temporary post of assistant surgeon for Statistical work in the Surgeon-General's Office ...	2,364
6. Re-distribution of the work of officers holding Indian Medical Service appointments ...	15,000
7. Appointment of Honorary Physicians and Surgeons (no immediate saving) ...	Nil.
8. Contribution to be made by the Government of India towards the cost of employing military assistant surgeons ...	29,304
9. Reduction of the leave and casualty reserve of civil assistant surgeons and sub-assistant surgeons ...	2,51,340
10. Substitution of sub-assistant surgeons for civil assistant surgeons ...	(Not known)
11. Substitution of house surgeons and physicians for civil assistant surgeons ...	35,280
12. Reduction of expenditure in the Madras Lunatic Asylum ...	40,000
13. Revision of the system of contracts for hospital supplies ...	30,000
14. Appointment of a Deputy Collector to supervise internal economy in hospitals ...	1,30,000
15. Reorganization of medical relief ...	(Not known)
16. Enhancement of fees in the Medical College ...	40,000
III.—ALLOWANCES.	
17. Recovery of house-rent from the Resident Medical Officer, General Hospital ...	900
18. Abolition of the allowance granted to civil assistant surgeons officiating in Indian Medical Service appointments ...	18,000
19. Abolition of the allowance of the Assistant Superintendent, Ophthalmic Hospital ...	1,200
20. Abolition of the charge allowance of civil assistant surgeons ...	52,200
21. Do. duty allowance of Assistants to District Medical and Sanitary Officers ...	13,800
22. Abolition of the duty allowance of the assistant surgeon in the Ootacamund Hospital ...	600
23. Reduction of the allowance of the Surgeon, First District ...	300
24. Reduction of allowance of District Medical and Sanitary Officers, Vizagapatam, Tanjore, Malabar and Madura, for charge of Medical Schools ...	2,400
25. Abolition of the allowance of District Medical and Sanitary Officer, Chingleput, as Superintendent of the Reformatory School ...	1,200
26. Abolition of the allowance of the District Medical and Sanitary Officer, Malabar, for charge of the Lunatic Asylum ...	600
27. Substitution of fixed fees for the allowances granted to the two Dental Surgeons ...	200
28. Reduction of the allowances of the Deputy Superintendent, Madras Lunatic Asylum, and recovery of house-rent ...	720
29. Substitution of enhanced scales of pay for the allowances drawn by assistant professors, lecturers, etc. ...	23,100

Estimate of savings—cont.

III.—ALLOWANCES—cont.

	Per annum.
30. Abolition of the allowance given to the assistant surgeon in the Royapetah Hospital (Rs. 50 for two months) ...	100
31. Abolition of the allowance given to the two assistant surgeons in the Royapetah Hospital for clinical teaching of medical pupils ...	1,200
32. Abolition of the allowance given to the military assistant surgeon, Government House Dispensary ...	600
33. Abolition of the allowances granted for instruction in first-aid and stretcher-drill ...	600
34. Abolition of the allowance of District Medical and Sanitary Officers for medical charge of Central jails ...	6,000
35. Abolition of the allowance of District Medical and Sanitary Officer, Tanjore, for medical charge of the Borstal Institute ...	1,200
36. Abolition of the allowance of District Medical and Sanitary Officer, Vizagapatam, for charge of Lunatic Asylum ...	600
37. Abolition of the allowance of the assistant surgeon in the Police hospital, Vellore ...	360
38. Abolition of the allowance of the assistant surgeon, Municipal Hospital, Kodaikanal, for vaccination work ...	120
39. Abolition of the allowance granted to the sub-assistant surgeon, Police hospital, Sivakasi, for charge of the Municipal dispensary ...	120
40. Abolition of the allowance granted to the sub-assistant surgeon, Cantonment hospital, St. Thomas' Mount ...	120
41. Abolition of the allowance granted to the sub-assistant surgeon, Municipal hospital, Cannanore ...	120
42. Abolition of the allowance granted to the compounder, Cantonment hospital, St. Thomas' Mount ...	60
43. Abolition of the allowance granted to the sub-assistant surgeon, Residency hospital, Travancore ...	120
44. Abolition of the allowance granted to the senior compounder, Ramachandrajetti Headquarter hospital, Tanjore ...	24
45. Abolition of the allowance of the ward attendant, Lunatic Asylum, Waltair, for washing clothes ...	24
46. Abolition of the allowance of the sub-assistant surgeon, Kavali, for visiting the criminal settlement ...	120
47. Abolition of the allowance granted to the sub-assistant surgeon, Rayapuram Hospital, as Medical Officer, Civil Debtors' Jail ...	360
48. Abolition of the allowance granted to the sub-assistant surgeon, Police hospital, Koraput ...	120
49. Abolition of the allowance granted to the Matron, Victoria Caste and Gosha Hospital, Triplicane, for training nurse pupils ...	360
50. Allowances of assistant surgeons in Lunatic Asylums ...	-480
51. Recovery of house-rent from assistant surgeons in Lunatic Asylums ...	946
52. Reduction of the allowance of sub-assistant surgeons in Lunatic Asylums ...	480
53. Abolition of the allowance given to compounders in Lunatic Asylums ...	180
54. Abolition of the allowance given to sub-assistant surgeons on epidemic duty ...	(Not known)
55. Abolition of the allowance given to nurses and midwives on epidemic duty ...	(Not known)
56. Reduction of the conveyance allowance of the assistant surgeon, Third District ...	240
57. Abolition of the cycle allowance of the sub-assistant surgeon, Municipal hospital, Cannanore ...	60
58. Abolition of the conveyance allowances of the sub-assistant surgeons, Plague Inspectors, etc., on famine or plague duty ...	(Not known)
59. Abolition of the house-rent allowances and the concession of free quarters to sub-assistant surgeons ...	70,000
60. Abolition of the house-rent allowances and the concession of free quarters to others ...	21,000
61. Grant of a consolidated allowance to the Resident Medical Officer, Rayapuram hospital ...	240
62. Grant of a consolidated allowance to the Resident Medical Officer, Maternity hospital ...	1,440
63. Grant of a consolidated allowance to the Resident Medical Officer, Ophthalmic hospital ...	840
64. Abolition of the allowances of the assistant surgeons in the King Institute, Guindy ...	1,800
65. Abolition of the allowances of the military assistant surgeon, Lawrence Memorial School, Lovedale ...	600
66. Abolition of the jail allowance of sub-assistant surgeons ...	6,120
67. Abolition of the allowance given to sub-assistant surgeons in charge of itinerating dispensaries ...	2,400

Estimate of savings—cont.

III.—ALLOWANCES—cont.

	Per annum.
68. Reduction of the allowance given to the sub-assistant surgeon attached to the Chenchu Officer, Atmakur ...	300
69. Abolition of the allowance given to sub-assistant surgeons employed in connexion with anti-hookworm work ...	1,800
70. Abolition of the allowance given to sub-assistant surgeons in the Pasteur Institute ...	720
71. Abolition of the allowance given to sub-assistant surgeons in the Forest College and in the Engineering College, Guindy ...	900
72. Revision of the scale of ration allowances ...	3,420
73. Abolition of the allowance given to the reserve compounder, Vizagapatam ...	180
74. Abolition of the extra pay to private sub-assistant surgeons temporarily entertained ...	(Uncertain)
Total saving per annum (exclusive of items in regard to which the exact amount cannot be estimated) ...	9,64,722
Grand total (A and B) ...	11,16,156

APPENDIX B.

Revisions of pay of officers in the Medical Department.

INDIAN MEDICAL SERVICE OFFICERS.

Appointments.	Pay prior to 1918 per mensem.	As revised in 1918 per mensem.	As revised in 1920 per mensem.
	RS.	RS.	RS.
Civil Surgeoncies—			
First class ...	550 to 1,150	550 to 1,750	650 to 2,100
Second class ...	450 to 1,350		
Professorships ...	750 to 1,650	800 to 2,000	900 to 2,350
Bacteriological Department ...	650 to 1,600	800 to 2,000	900 to 2,350
Surgeon-General ...	2,500	3,000	3,000
Director of Public Health ...	1,500—60—1,800	1,800—60—2,100	2,100—60—2,400

NOTE.—The above list refers to the main classes of appointments and is not exhaustive.

PROVINCIAL MEDICAL SERVICE.

	Pay prior to 1st April 1920.	As revised
Civil Assistant Surgeons ...	Rs. 100—100—10 300, 325, 350 (average 190.23).	Rs. 200—15—350—20—450 (average 844).
Civil Surgeons ...	Rs. 400—20—500	Rs. 500—50—900, 1,000.

SUB-ASSISTANT SURGEONS.

Pay prior to 1st March 1918 ...	Rs. 30 to 100 (average 56).
Pay as revised in 1918 ...	Rs. 50 to 100, 110, 120 (average 76).
in 1921 ...	Rs. 75—5—175, 200 (average 136.25).

APPENDIX C.

Appointment of Honorary Physicians and Surgeons.

Evidence given by Lieut.-Col. F. F. Elwes, C.I.E., I.M.S., and M.R.Ry. Rao Bahadur C. NATISA MUDALIYAR AVARGAL, M.L.C.

Colonel Elwes stated that he had no objection to the appointment of honorary physicians and surgeons as supernumeraries, but there would be difficulties if the proposal was that they should replace permanent officers, for a physician or surgeon at the General Hospital has to spend about three hours in the morning in the hospital and also do lecturing work in the afternoons. He stated that there were two possibilities in connexion with the appointment of honorary physicians and surgeons:

- (1) That they should replace members of the staff.
- (2) That they should be appointed in addition to the present staff.

As regards No. (1) Colonel Elwes considered it impracticable as no private practitioner could afford to give some five hours of his time for doing hospital and college work, and in addition to this, practically all the members of the staff have additional duties. It would therefore be necessary to appoint two or three men to replace each member of the staff.

As regards No. (2) Colonel Elwes said he would welcome the appointment of additional honorary physicians and surgeons, but they must be prepared to undertake clinical teaching, as, if they did not do this, the beds under their charge would be struck off the list of those used for clinical teaching purposes, and this would be very bad for the students, as even now there are barely sufficient beds for clinical instruction for the large number of students attending.

Normally there are between 250 and 300 students working in the hospital. The honorary physician or surgeon will not be in a position to choose his own time and he will have to be at the hospital at fixed hours. He thought it was very unlikely that any honorary physician or surgeon in Madras would consent to put five hours of honorary work at the hospital and that too at fixed hours.

He considers that the lowest qualifications for an honorary physician should be M.B. or M.D. In England every honorary physician is either an M.D. or M.R.C.P. and every honorary surgeon an F.R.C.S. or M.S.

Questioned as regards the possibility of enforcing discipline, Colonel Elwes stated that an honorary physician or surgeon could not be relied upon to be at his task at the appointed time.

He strongly advocated Colonel Symons' proposal to divide the General Hospital into two units, one surgical and the other medical. He pointed out that the first physician and first surgeon have to sign every clinical certificate for the University and if honorary physicians and surgeons are to be appointed, they should be made responsible to the Professors of Medicine and Surgery.

In reply to Dr. Nedungadi he stated that the average number of beds in the charge of a physician at the General Hospital was about 75. He thought that the number could be reduced to 50 and instead of 7 officers, 10 officers could be employed. He considered that it would be a good thing for every leading private practitioner to have been a house physician or house surgeon, and that the system of appointing house physicians and surgeons should be encouraged.

In reply to further questions by Dr. Nedungadi, he stated that most Indian Medical Service officers had had teaching experience in England as house physicians and surgeons and that if a sufficient number of house surgeons could be appointed in this country, a great many of them would be quite capable in course of time of doing teaching work. He said that, on the whole, Indian Professors had done very well at the Medical College.

Dr. Natesa Mudaliyar heartily approved of the proposal to appoint house physicians and surgeons and was of opinion that persons will freely volunteer to work as supernumeraries if invited to do so.

APPENDIX D.

Expenditure on hospitals taken over by the Government during the last five years.

	Date of assumption of charge by the Government.	1917.	1918.	1919.	1920.	1921.
Presidency Hospitals.						
1. Royapettah Hospital	1st Oct. 1919	Rs. 47,194	Rs. 60,664	Rs. 63,942	Rs. 69,082	Rs. 1,00,457
2. Tuberculosis Hospital	16th March 1921					30,123
3. " Institute	1st Jan. 1922	22,104	34,109	69,563	98,805	1,53,609
4. Victoria Caste and Gosha Hospital	1st Apr. 1920	67,519	37,585	42,823	49,610	69,614
District Headquarter Hospitals.						3,53,803
1. Berhampur	1st Apr. 1918	10,815	9,438	10,118	18,580	19,724
2. Vizagapatam	1st July 1918	19,745	21,955	30,501	30,278	33,933
3. Cocanada	1st Apr. 1918	16,375	14,890	24,272	28,328	23,197
4. Masulipatam	1st Apr. 1918	13,525	15,461	14,201	19,445	25,125
5. Guntur	1st Apr. 1918	62,009	41,092	39,708	32,943	42,450
6. Nellore	1st Apr. 1920	16,786	14,650	14,878	19,311	20,845
7. Kurnool	1st Apr. 1919	11,435	9,894	21,822	29,683	21,279
8. Bellary	1st Dec. 1917	20,040	18,698	19,780	27,157	21,895
9. Anantapur	1st Apr. 1918	8,573	8,547	11,468	13,883	16,851
10. Cuddapah	1st Apr. 1918	10,146	7,961	11,297	18,860	20,095
11. Vellore	1st Apr. 1918	19,354	21,692	25,464	45,909	42,831
12. Chittoor	1st Apr. 1918	13,060	11,130	20,269	25,180	22,043
13. Chingleput	1st Apr. 1918	10,741	14,409	8,596	10,171	15,731
14. Cuddalore	1st July 1918	12,113	11,851	18,594	15,758	21,600
15. Salem	1st Apr. 1920	14,362	15,932	20,251	29,074	21,076
16. Coimbatore	1st Apr. 1918	17,495	23,184	26,761	29,900	34,220
17. Trichinopoly	1st Apr. 1920	26,298	27,941	31,911	30,969	50,705
18. Tanjore	1st Apr. 1918	52,130	36,311	47,829	62,598	79,598
19. Madura	1st Apr. 1918	36,808	50,818	60,410	53,750	1,08,025
20. Ramnad	1st Apr. 1918	11,860	12,826	16,434	14,748	19,490
21. Palamoota	1st Jan. 1921	12,390	14,429	16,566	22,748	20,884
22. Ootacamund	1st Apr. 1920	23,609	34,079	43,312	63,290	53,127
23. Calicut	1st Apr. 1920				24,895	24,892
24. Mangalore	1st Apr. 1919	11,111	12,530	18,386	20,014	23,801
Do. (W. & C.)	1st Apr. 1919	5,030	6,821	4,939	8,307	8,442
Calicut (W. & C.)	1st Apr. 1920	20,816	19,469	24,982	15,374	19,138
Salem (W. & C.)	1st Apr. 1920	7,143	6,638	8,675	9,189	13,782
Vizianagram (W. & C.)						
Taken over only in 1922.						8,18,779

APPENDIX E.

Comparative statement showing the expenditure on the Presidency hospitals during the last five years.

Hospital.	Year.	Number of beds.	Average number of patients.		Cost of Medical Officers.	Nursing staff.	Clerical and other establishments.	Menials.	Medicines.	Dieting charges.	Contingencies.
			In.	Out.							
General hospital ..	1917-18	500	373	485	Rs. 61,871	Rs. 53,911	Rs. 14,530	Rs. 28,811	Rs. 48,278	Rs. 58,595	Rs. 61,198
	1918-19	500	404	409	65,769	63,218	17,119	33,087	57,943	67,715	75,655
	1919-20	500	422	387	75,891	67,336	21,271	34,516	56,503	1,12,814	77,746
	1920-21	520	428	382	95,356	71,812	25,005	43,072	44,976	1,50,000	1,00,553
	1921-22	520	459	389	1,01,869	78,638	26,952	44,885	1,03,520	1,31,096	1,27,448
Royapuram hospital.	1917-18	192	107	338	3,740	8,178	7,921	1,669	16,561	11,840	50,987
	1918-19	192	149	307	6,069	11,744	10,515	2,813	21,468	18,984	54,519
	1919-20	210	178	305	5,376	15,634	12,105	3,755	6,132	39,901	54,298
	1920-21	250	217	315	8,328	24,344	16,887	7,509	..	59,011	1,10,357
	1921-22	250	226	399	11,247	24,599	19,304	7,399	5,609	58,746	93,846
Royapettah hospital.	1917-18	..	..	..	..	..	..	..	..	..	..
	1918-19	..	..	..	..	..	..	..	..	..	..
	1919-20	76	87	342	3,066	2,039	2,867	1,617	611	6,308	32,206*
	1920-21	..	88	309	7,292	5,397	8,593	3,722	788	17,567	21,369
	1921-22	..	104	305	10,019	6,067	10,536	3,082	11,933	20,097	33,993
Ophthalmic hospital.	1917-18	170	196	221	10,484	5,325	6,034	3,385	5,212	23,484	16,586
	1918-19	170	205	190	10,582	5,200	7,052	4,057	6,885	26,747	19,673
	1919-20	170	247	226	17,371	6,619	8,123	4,718	7,857	47,965	27,257
	1920-21	170	264	209	18,026	6,871	11,000	7,042	11,175	54,042	30,483
	1921-22	170	266	206	28,943	6,802	12,970	6,125	8,329	55,490	36,335
Maternity hospital.	1917-18	238	551	107	14,135	23,423	8,212	4,450	11,880	28,750	55,924
	1918-19	238	153	128	19,099	29,150	9,191	4,606	9,784	27,569	57,215
	1919-20	238	105	170	29,232	26,191	11,286	6,036	16,922	46,556	85,722
	1920-21	238	173	259	18,743	33,773	13,989	7,997	16,922	51,774	96,026
	1921-22	238	176	257	33,992	49,662	17,416	8,910	33,958	57,627	82,869
Victoria Caste and Gosha hospital.	1917	82	80	100	7,912	5,526	933	1,615	842	6,350	22,941
	1918	82	94	115	8,322	5,810	995	1,671	7,899	8,033	9,260
	1919	82	94	121	8,684	6,572	997	2,617	5,268	12,270	5,645
	1920	82	94	104	8,522	8,078	2,217	3,155	926	13,246	13,916
	1921	82	85	91	14,979	11,413	2,103	4,303	3,809	15,164	27,555
Leper hospital	1917-18	274	202	8	4,846	750	1,756	856	1,409	18,924	4,795
	1918-19	263	221	4	6,260	750	1,773	1,092	3,180	22,281	5,166
	1919-20	263	209	4	3,291	1,340	2,211	1,178	4,971	31,409	10,230
	1920-21	263	213	2	4,714	1,490	2,433	2,305	4,953	37,110	20,470
	1921-22	263	212	2	9,087	1,462	3,696	2,375	4,337	35,813	18,890
Lunatic Asylum ..	1917-18	..	623	..	22,892	6,744	17,434	1,643	343	61,782	22,691
	1918-19	..	641	..	19,509	6,745	18,197	1,917	9,743	71,452	27,029
	1919-20	..	639	..	17,251	7,873	19,166	2,072	8,199	1,01,924	33,686
	1920-21	..	615	..	26,181	6,911	25,912	3,075	161	1,31,637	53,836
	1921-22	..	626	..	31,508	8,324	34,980	2,918	13,394	1,41,034	61,443

* The figures for 1919-20 represent six months' charges.

APPENDIX F.

List of allowances drawn by Medical officers employed in unhealthy and expensive localities.

I—UNHEALTHY LOCALITIES.

(i) Gazetted Officers.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem. Rs.	Remarks.
1. District Medical and Sanitary Officer, Agency Division.	Waltair ..	Special pay ..	200	
2. Military Assistant Surgeon, Police and Sub-Jail Hospital.	Koraput ..	Do. ..	50	
3. Military Assistant Surgeon, Local Fund Hospital.	Gudalur ..	Compensatory ..	50	
4. Civil Assistant Surgeon, Local Fund Hospital.	Vayitiri ..	Do. ..	50	Sub-assistant surgeon has now been appointed. His allowance has not been fixed
	Manantoddy ..	Do. ..	50	

I.—UNHEALTHY LOCALITIES—cont.

(ii) Non-Gazetted Officers.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
MALABAR.				
1. Sub-Assistant Surgeon, Sultan's Battery Dispensary.	Sultan's Battery ..	Wynad ..	25	
2. Sub-Assistant Surgeon, Local Fund Dispensary.	Tamaracheri ..	Do. ..	10	
CHINGLEPUT.				
3. Sub-Assistant Surgeon, Local Fund Dispensary.	Pulicat ..	Malarial ..	15	
COIMBATORE.				
4. Sub-Assistant Surgeon, Local Fund Dispensary.	Talavadi ..	Local ..	15	Kollegal taluk.
5. Do.	Hanur ..	Do. ..	10	Do.
6. Plague Inspector ..	Kollegal ..	Hill ..	10	
NELLORE.				
7. Sub-Assistant Surgeon, Local Fund Dispensary.	Sulurpet ..	Local ..	10	For visiting Sriharikota once a week.
CUDDAPAH.				
8. Sub-Assistant Surgeons Head-quarter Hospital (3).	Cuddapah ..	Malarial ..	10 each.	
CHITTOOR.				
9. Sub-Assistant Surgeon, Municipal Hospital.	Tirupati ..	Local ..		
10. Sub-Assistant Surgeon, Local Fund Dispensary.	Venkatagirikota ..	Do. ..		
KISTNA.				
11. Sub-Assistant Surgeon, Local Fund Dispensary.	Chintalapudi ..	Local ..		
12. Do.	Kovur ..	Do. ..		
MADURA.				
13. Sub-Assistant Surgeon, Public Works Department Dispensary.	Tekkadi ..	Local ..	25	
14. Peon, Public Works Department Dispensary.	Do. ..	Do. ..	3½	
GANJAM.				
15. Sub-Assistant-Surgeon, Local Fund Dispensary.	Ganjam ..	Local ..	10	
16. Do.	Kallikota ..	Do. ..	5	
VIZAGAPATAM.				
17. Sub-Assistant Surgeon, Lakshminarasayya Ammal's Hospital.	Kurupam ..	Local ..	5	
GODAVARI.				
18. Sub-Assistant Surgeon, Local Fund Dispensary.	Gokavaram ..	Local ..		
19. Do.	Yeleswaram ..	Do. ..	5	
AGENCY.				
20. Sub-Assistant Surgeons in the Agency (37).	Agency ..	Local ..	Before 1st January 1922, 30 per cent of pay. After 1st January 1922, 50 per cent of pay subject to a maximum of Rs. 60.	
21. Compounders ..	Do. ..	Do. ..	Not less than Rs. 8.	50 per cent of pay subject to a maximum of Rs. 15.
22. Midwives ..	Do. ..	Do. ..	Do.	50 per cent of pay subject to a maximum of Rs. 20 for lower scale (Rupees 30—2—50) and Rs. 25 for the higher scale (Rs. 50—2—70).
23. Deputy Inspectors of Vaccination (9).	Do. ..	Do. ..	15	50 per cent of pay subject to a maximum of Rs. 40.
24. Peons under Deputy Inspectors of Vaccination (9).	Do. ..	Do. ..	1	2
25. Vaccinators (25) ..	Do. ..	Do. ..	10	50 per cent of pay subject to a maximum of Rs. 12½.

II.—EXPENSIVENESS OF LOCALITY.

(i) Gazetted Officers.

Appointment.	Station.	Existing classification.	Amount of allowance.	Remarks.
RS.				
1. Civil Assistant Surgeon, Local Fund Dispensary.	Pamban ..	Local ..	30	
2. Civil Assistant Surgeon, Local Fund Hospital.	Rameswaram ..	Do. ..	30	
3. Military Assistant Surgeon, Municipal Hospital.	Kodaikanal ..	Compensatory ..	20	
4. Lady Assistant Surgeon, Head-quarter Hospital.	Ootacamund ..	Local ..	30	
5. Lady Apothecary, St. Bartholomew's Hospital.	Do. ..	Do. ..	30	

(ii) Non-gazetted officers.

THE NILGIRIS.							
1. Sub-Assistant Surgeons, Lawley Hospital (2).	Coonoor	..	..	Local	..	15 or 10	} Rs. 15 for sub-assistant surgeons with service over 15 years and Rs. 10 for others.
2. Sub-Assistant Surgeon, Local Fund Dispensary.	Kolakombai	..	..	Do.	..	15 or 10	
2. Sub-Assistant Surgeon, Government Hospital.	Ootacamund	..	..	Do.	..	15 or 10	
4. Peon, Civil Dispensary	Do.	..	..	Do.	..	2	} One-third of pay.
5. Sub-Assistant Surgeon on plague duty.	Do.	..	..	Hill	..		
6. Plague Circle Inspector	Coonoor	..	..	Do.	..		
7. Plague Inspector, Nilgiris rural areas.	Do.	..	..	Do.	..		
8. Sub-Assistant Surgeons, Pasteur Institute (2).	Do.	..	..	Local	..	10	
9. Indian Nurses, St. Bartholomew's Hospital (2).	Ootacamund	..	..	Do.	..	10 each.	
10. Compounders, St. Bartholomew's Hospital (2).	Do.	..	..	Do.	..	5 each.	
11. Deputy Inspector of Vaccination.	Do.	..	..	Do.	..	15	
12. Peon under Deputy Inspector of Vaccination.	Do.	..	..	Do.	..	1	
MADRAS.							
13. Compounder, Government House Dispensary.	Madras	..	..	Local	..	5	
Sub-Assistant Surgeons at the Presidency town.							
14. Penitentiary (2)	} Madras	..	..	Presidency	..	10 each.	
15. Civil Debtors Jail (1)							
16. General Hospital (2)							
17. Maternity Hospital (2)							
18. Leper Hospital, Rayapuram (1)							
19. Ophthalmic Hospital (5)							
20. Lunatic Asylum (1)							
21. Rayapuram Hospital and Medical School (9).							
22. Tuberculosis Institute (1)							
23. Marine Dispensary (1)							
24. Raja Sir Ramaswami Mudaliyar's Lying-in Hospital (1).							
SOUTH ARCOT.							
25. Sub-Assistant Surgeon, Local Fund Dispensary.	Aziznagar	..	..	Local	..	10	
RAMNAD.							
26. Nurse on plague duty	Dhanushkodi	..	..	Local	..	10	

APPENDIX G.

List of allowances drawn by medical officers for special language qualification.

The following are the orders governing the question:—

- (1) Under G.O. No. 961, Public, dated 5th September 1896, all non-Telugu sub-assistant surgeons who have a knowledge of Telugu are granted an allowance of Rs. 2 when serving in a Telugu area.
- (2) In G.O. No. 30, Public, dated 19th January 1893, a similar allowance was granted for knowledge of Oriya.
- (3) In G.O. No. 459, dated 4th May 1901, a similar allowance was granted for knowledge of Soura, the examination in all cases being colloquial.
- (4) Under G.O. No. 368, Public, dated 20th May 1905, medical subordinates are granted a reward of Rs. 250 for passing an examination in the Khond language.

At present, the following medical subordinates are drawing the language allowances specified :—

Telugu.

BELLARY DISTRICT.

1. Lady Sub-Assistant Surgeon Mrs. A. D. Carmody.
2. Local Fund Dispensary, Kampli, Sub-Assistant Surgeon V. Balakrishna Ayyar, No. 908.

CUDDAPAH DISTRICT.

1. Headquarter Hospital, Cuddapah, Sub-Assistant Surgeon S. V. Ramaswami Ayyar.
2. Local Fund Hospital, Rajampet, Sub-Assistant Surgeon T. Gnanayya, No. 950.
3. Municipal Hospital, Proddatur, Sub-Assistant Surgeon N. Ulaganatha Madaliyar, No. 691.

GUNTUR DISTRICT.

1. Local Fund Hospital, Bapatla, Sub-Assistant Surgeon C. A. Savirithayan, No. 590.
2. Local Fund Dispensary, Ponnur, Sub-Assistant Surgeon L. A. Araygyaswami Pillai, No. 546.
3. Local Fund Dispensary, Vinakonda, R. Abdul Aziz Sahib, No. 760.
4. Headquarter Hospital, Guntur, Temporary Sub-Assistant Surgeon P. Appa.

KURNOOL DISTRICT.

1. Police Hospital, Kurnool, Sub-Assistant Surgeon I. Muhammed Anzum, No. 707.
2. Headquarter Hospital, Kurnool, Sub-Assistant Surgeon P. P. Chanda Nambiyar, No. 981.
3. Local Fund Dispensary, Dhone, Sub-Assistant Surgeon S. Arumachalam, No. 1187 (a).
4. Do. Gudur, Temporary Sub-Assistant Surgeon D. N. Israel.
5. Do. Markapur, T. M. Thambuswami Pillai.

NELLORE DISTRICT.

1. Local Fund Dispensary, Kandukur, Sub-Assistant Surgeon B. Doraiswami Pillai, No. 622.
2. Do. Kavali, Sub-Assistant Surgeon Abdul Aziz Ahmad Sahib, No. 480.
3. Do. Indurpet, Sub-Assistant Surgeon Mahammad Abdul Karim Sahib, No. 708.
4. Do. Muthukur, K. Annappa Nayak, No. 568.
5. Do. Nayadupet, R. Srinivasa Pillai, No. 494.
6. Municipal Branch Dispensary, Nellore, K. Shiva Rao, No. 646.

VIZAGAPATAM DISTRICT.

1. Lunatic Asylum, Waltair, Sub-Assistant Surgeon Muhammad Abdul Khuddus, No. 556.

Oriya.

GANJAM DISTRICT.

1. Sub-charge, Local Fund Hospital, Russelkonda, Sub-Assistant Surgeon K. Satyanarayana Raja, No. 1163.
2. Local Fund Sub-Assistant Surgeons at—
(i) Gopalpur.
(ii) Sompeta.
(iii) Chatrapur.
(iv) Calingapatam.
(v) Narasannapet.
(vi) Aska.

Soura and Khond.

Nobody is receiving an allowance for these languages.

APPENDIX II.

List of officers in the Medical Department who receive house-rent allowance or free quarters.

Indian Medical Service officers.

Appointment.	Station.	Existing classification.	Amount of allowance.
Medical officers who are debarred from, or refuse to accept, private practice.	Madras	House-rent	Rs. 125
		Lieutenant-Colonel.	
		Major	100
		Captain	75
		Lieutenant	40

N.B.—(i) The following officers in the Presidency town are debarred from private practice :—

- (1) Director of Public Health.
- (2) Assistant Directors of Public Health.
- (3) Superintendent, General Hospital (consulting practice allowed).
- (4) Personal Assistant to the Surgeon-General.
- (5) Assistant Superintendent, Maternity Hospital } (free quarters).
- (6) Superintendent, Government Lunatic Asylum }
- (7) Chemical Examiner to Government (draws house-rent allowance Rs. 75).

No house-rent allowance is drawn if salary exceeds Rs. 1,400 a month.

N.B.—(ii) The following officers in the Presidency town are debarred from private practice if they receive house-rent allowance or occupy rent-free quarters :—

- (1) Resident Medical Officer, General Hospital (occupies free quarters).
- (2) Fourth Physician, General Hospital.
- (3) Third Surgeon, General Hospital.

(i) Gazetted Officers.

Appointment.	Station.	Existing classification.	Amount of allowance.	Remarks.
1. Civil Assistant Surgeon, Tuberculosis Hospital.	Madras	House-rent	Rs. 50	
2. Second Military Assistant Surgeon, Ophthalmic Hospital.	Do.	Do.	110	Excess rent paid by him over and above the rent recoverable from him under the 10 per cent rule for the rented quarters occupied by him.
3. Resident Assistant Surgeon, Civil Hospital.	Secunderabad	Do.	30	....
4. Military Assistant Surgeon, Local Fund Hospital.	Kotagiri	Do.	60	....
5. Lady Assistant Surgeon, Headquarter Hospital.	Vellore	Do.	25	Personal to the present incumbent.
6. Lady Apothecary, St. Bartholomew's Hospital.	Ootacamund	Do.	30	....
7. Lady Apothecary, Headquarter Hospital.	Coimbatore	Do.	20	The Surgeon-General has been asked to arrange for the leasing of a house for the Lady Apothecary.
8. Lady Apothecary, Headquarter Hospital.	Madura	Do.	38½	Vide remark against item 2.

FREE QUARTERS.

Free quarters are provided for the following officers :—

GOVERNMENT MATERNITY HOSPITAL.

1. Superintendent (I.M.S.)	Madras	....	....
2. Assistant Superintendent (C.A.S.)	Do.	....	....
3. Resident Assistant Surgeon (M.A.S.)	Do.	....	....
4. Lady Assistant Surgeon	Do.	....	....

GOVERNMENT OPHTHALMIC HOSPITAL.

5. Resident Assistant Surgeon (M.A.S.)	Madras		
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LUNATIC ASYLUM.

6. Superintendent (I.M.S.)	Madras		
7. Deputy Superintendent (M.A.S.)	Do.		
8. Civil Assistant Surgeon	Do.		

GOVERNMENT GENERAL HOSPITAL.

9. Resident Medical Officer (I.M.S.)	Madras		
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GOVERNMENT LEPROSY HOSPITAL.

10. Resident Surgeon (C.A.S.)	Madras		
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KING INSTITUTE OF PREVENTIVE MEDICINES, GUINDY.

11. Director	Guindy		
12. Assistant Director	Do.		
			The Assistant Director has been permitted to occupy the quarters of the Director. He does not draw house-rent allowance.

RAYAPURAM HOSPITAL.

13. Resident Medical Officer (M.A.S.)	Madras		
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ROYAPETTA HOSPITAL.

14. Resident Medical Officer (C.A.S.)	Madras		
15. Resident Assistant Surgeon	Madura		
16. Resident Assistant Surgeon	Tanjore	....	....
17. House Surgeons (where quarters are available).	....	....	....

VICTORIA CASTLE AND GOSHA HOSPITAL.

18. Superintendent	Madras	....	....
19. House Surgeons	Do.	....	....

(ii) *Non-gazetted officers.*

Under paragraph 204 of the Medical Code, all sub-assistant surgeons serving in the mufassal who are not provided with free quarters are granted a house-rent allowance of Rs. 5. In the Presidency town, they have hitherto been granted a house rent allowance of Rs. 15. In the mufassal, however the uniform rate has been departed from in a great number of cases. The house-rent allowances are, therefore, shown below districtwar :—

Appointment.	Station.	Existing classification.	Amount of allowance.	Remarks.
ANANTAPUR.				
<i>(a) Paid by Government.</i>				
1. Reserve Sub-Assistant Surgeon, Headquarter Hospital (1).	Anantapur ..	House-rent ..	5	
2. Sub-Assistant Surgeon, Headquarter Hospital (1).	Do. ..	Do. ..	Free quarters.	
3. Sub-Assistant Surgeon, Police Hospital (1).	Do. ..	Do. ..	Do.	
<i>(b) Paid by local bodies.</i>				
4. Sub-Assistant Surgeon, Local Fund Dispensary.	Guntakal ..	House-rent ..	12	
5. Do. do.	Kadiri ..	Do. ..	8	
6. Sub-Assistant Surgeon, Municipal Hospital (1).	Hindupur ..	Do. ..	8	
7. Sub-Assistant Surgeon, Local Fund Dispensary.	Kalyandrug ..	Do. ..	5	
8. Do. do.	Pamidi ..	Do. ..	5	
9. Do. do.	Uravakonda ..	Do. ..	5	
10. Do. do.	Yadiki ..	Do. ..	5	
11. Do. do.	Bukkapatnam ..	Do. ..	5	
12. Do. do.	Madakasira ..	Do. ..	5	
13. Do. do.	Penukonda ..	Do. ..	4	
14. Do. do.	Dharmavaram ..	Do. ..	Free quarters.	
15. Do. do.	Tanakal ..	Do. ..	Do.	
16. Sub-Assistant Surgeon, Municipal Hospital (1).	Tadpatri ..	Do. ..	Do.	
ARCOT, NORTH.				
<i>(a) Paid by Government.</i>				
17. Sub-Assistant Surgeons, Government Pentland Hospital (2).	Vellore ..	House-rent ..	15 each.	
18. Reserve Sub-Assistant Surgeons, Government Pentland Hospital (3).	Do. ..	Do. ..	10 „	
19. Sub-Assistant Surgeon, Police Training School Hospital (1).	Do. ..	....	....	Held by Civil Assistant Surgeon.
20. Sub-Assistant Surgeons, Central Jail (3).	Do. ..	....	....	
<i>(b) Paid by local bodies.</i>				
21. Sub-Assistant Surgeon, Municipal Hospital (1).	Tiruppattur ..	House-rent ..	12½	
22. Sub-Assistant Surgeon, Municipal Dispensary.	Vellore ..	Do. ..	12	
23. Lady Sub-Assistant Surgeon, Women and Children Dispensary.	Vaniyambadi ..	Do. ..	10	
24. Sub-Assistant Surgeon, Local Fund Hospital (1).	Arni ..	Do. ..	8½	
25. Sub-Assistant Surgeon, Local Fund Dispensary.	Pernambut ..	Do. ..	6	
26. Do. do.	Alangayam ..	Do. ..	5	
27. Do. do.	Chetput ..	Do. ..	5	
28. Do. do.	Polur ..	Do. ..	5	
29. Do. do.	Kuppam ..	Do. ..	3	
30. Do. do.	Tiruvattur ..	....	Free quarters.	
31. Do. do.	Arkonam ..	....	Do.	
32. Do. do.	Aroot ..	....	Do.	
33. Do. do.	Chengam ..	....	Do.	
34. Sub-Assistant Surgeon, Local Fund Hospital (1).	Ambar ..	....	Do.	
35. Local Fund Women and Children Hospital.	Tirappattur ..	....	....	Held by Lady Apothecary.
36. Municipal Hospital ..	Gudiyattam ..	....	....	Held by Civil Assistant Surgeon.
37. Do. ..	Tiruvannamalai ..	....	....	Do.
38. Do. ..	Vaniyambadi ..	....	....	Do.
39. Do. ..	Walaipet ..	....	....	Do.
40. Sub-Assistant Surgeon, Local Fund Hospital.	Vandiwash ..	....	....	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
ARCOT, SOUTH.				
<i>(a) Paid by Government.</i>				
41. Nursing Sisters, Headquarter Hospital (2).	Cuddalore ..	House-rent ..	25 each.	
42. Sub-Assistant Surgeons, Headquarter Hospital (2).	Do. ..	Do. ..	12 „	
43. Reserve Sub-Assistant Surgeons, Headquarter Hospital (3).	Do. ..	Do. ..	12 „	
44. Sub-Assistant Surgeon, District Jail (1).	Do. ..	....	Free quarters.	
<i>(b) Paid by local bodies.</i>				
45. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Tiruppapuliyur ..	House-rent ..	12	
46. Sub-Assistant Surgeon, Municipal Hospital (1).	Chidambaram ..	Do. ..	10	
47. Sub-Assistant Surgeon, Local Fund Dispensary.	Kurinchippadi ..	Do. ..	7	
48. Do. do.	Srimushnam ..	Do. ..	5	
49. Do. do.	Sankarapuram ..	Do. ..	5	
50. Do. do.	Glundurpet ..	Do. ..	5	
51. Do. do.	Porto Novo ..	....	Free quarters.	
52. Do. do.	Nellikuppam ..	....	Do.	
53. Do. do.	Panruti ..	....	Do.	
54. Do. do.	Gingee ..	....	Do.	
55. Do. do.	Merkanam ..	....	Do.	
56. Do. do.	Tittagudi ..	....	Do.	
57. Sub-Assistant Surgeon, Municipal Branch Hospital (1).	Cuddalore O.T. ..	....	Do.	
58. Sub-Assistant Surgeon, Local Fund Dispensary.	Mannargudi ..	....	....	
59. Do. do.	Valavanur ..	....	....	
60. Do. do.	Vanur ..	....	....	
61. Local Fund Hospital (1)	Tindivanam ..	....	....	Held by Civil Assistant Surgeon.
62. Do. ..	Kallakurichi ..	....	....	Do.
63. Do. ..	Tirukkoyilur ..	....	....	Do.
64. Do. ..	Vridhaachalam ..	....	....	Do.
65. Sub-Assistant Surgeon, Raja Sir Ramaswami Mudaliyar's Women and Children Dispensary.	Cuddalore N.T. ..	....	....	Held by Lady Apothecary.
66. Sub-Assistant Surgeon, Municipal Hospital.	Villupuram ..	....	....	Held by Civil Assistant Surgeon.
Local Fund Dispensary.	Aziznagar ..	....	....	Temporarily closed.
BELLARY.				
<i>(a) Paid by Government.</i>				
67. Sub-Assistant Surgeon, Headquarter Hospital (1).	Bellary ..	House-rent ..	Free quarters	
68. Sub-Assistant Surgeons, Headquarter Hospital (2).	Do. ..	....	Do.	
69. Sub-Assistant Surgeons, Central Jail (2).	Do. ..	....	Do.	
70. Lady Sub-Assistant Surgeon, Women and Children Hospital (1).	Do. ..	....	Do.	
71. Sub-Assistant Surgeons, Alipuram Jail (10).	Do. ..	....	Do.	
<i>(b) Paid by local bodies.</i>				
72. Sub-Assistant Surgeon, Municipal Hospital (1).	Hospet ..	House-rent ..	10	
73. Sub-Assistant Surgeon, Local Fund Dispensary.	Hadagalli ..	Do. ..	9	
74. Do. do.	Kotturu ..	Do. ..	6	
75. Do. do.	Kudligi ..	Do. ..	6	
76. Sub-Assistant Surgeon, Municipal Hospital (1).	Adoni ..	Do. ..	6	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
BELLARY—cont.				
<i>(b) Paid by local bodies—cont.</i>				
77. Sub-Assistant Surgeon, Local Fund Dispensary.	Kosgi	House-rent	Rs. 5	
78. Sub-Assistant Surgeon, Local Fund Hospital.	Rayadurg	Do.	5	
79. Sub-Assistant Surgeon, Local Fund Dispensary.	Kurugodu	Do.	5	
80. Do.	Harpanahalli	Do.	5	
81. Do.	Kanekal	Do.	5	
82. Sub-Assistant Surgeon, Local Fund Hospital (1).	Alur	....	Free quarters.	
83. Do.	Yemmiganuru	....	Do.	
84. Sub-Assistant Surgeon, Local Fund Dispensary.	Siruguppa	....	Do.	
85. Do.	Kampli	....	Do.	
86. Sub-Assistant Surgeon, Municipal Dispensary.	Cowl Bazaar	....	Do.	
87. Lady Sub-Assistant Surgeon, Victoria Memorial Women and Children Dispensary.	Adoni	....	....	
CHINGLEPUT.				
<i>(a) Paid by Government.</i>				
88. Sub-Assistant Surgeon, King Institute (1).	Guindy	House-rent	..	
89. Sub-Assistant Surgeon, Engineering College Hospital (1).	Do.	....	Free quarters.	
90. European Overseer	Do.	....	Do.	
91. Senior Mechanic	Do.	....	Do.	
92. Driver, Pumping station	Do.	....	Do.	
93. Fireman	Do.	....	Do.	
94. Sub-Assistant Surgeon, Reformatory School (1).	Chingleput	....	Do.	
95. Sub-Assistant Surgeons, Headquarter Hospital (2).	Do.	....	....	
96. Lady Sub-Assistant Surgeon, Headquarter Hospital (1).	Do.	....	....	
97. Reserve Sub-Assistant Surgeons, Headquarter Hospital (3).	Do.	....	....	
<i>(b) Paid by local bodies.</i>				
98. Sub-Assistant Surgeon, Local Fund Dispensary.	Pallavaram	House-rent	..	
99. Do.	Tirukkalikkundram	Do.	8	
100. Do.	Poonamallee	Do.	8	
101. Do.	Sembiyam	Do.	8	
102. Do.	Sattiyavedu	Do.	6	
103. Do.	Cheyur	Do.	5	
104. Do.	Chunampet	Do.	5	
105. Do.	Tirupporur	Do.	5	
106. Do.	Tiruvottiyur	Do.	5	
107. Do.	Nagalapuram	Do.	5	
108. Do.	Ponneri	Do.	4	
109. Do.	Sriperumbudur	Do.	3	
110. Do.	Madurantakam	....	Free quarters.	
111. Do.	Uttiramerur	....	Do.	
112. Do.	Pulicat	....	Do.	
113. Sub-Assistant Surgeon, Municipal Hospital (1).	Conjeeveram	....	....	
114. Lady Sub-Assistant Surgeon, Women and Children Dispensary.	Do.	....	....	
115. Municipal Dispensary	Saidapet	....	....	Held by Civil Assistant Surgeon.
116. Local Fund Dispensary	Tiruvallur	....	....	Do.
CHITTOOR.				
<i>(a) Paid by Government.</i>				
117. Sub-Assistant Surgeon, Headquarter Hospital (1).	Chittoor	House-rent	10	
118. Lady Sub-Assistant Surgeon, Headquarter Hospital (1).	Do.	Do.	10	
119. Reserve Sub-Assistant Surgeons, Headquarter Hospital (2).	Do.	Do.	7	
120. Sub-Assistant Surgeon, Headquarter Hospital (1).	Do.	....	Free quarters.	
121. Nurse Supervisor, Headquarter Hospital.	Do.	....	Do.	
122. Ward attendants and totis	Do.	....	....	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
CHITTOOR—cont.				
<i>(b) Paid by local bodies.</i>				
123. Sub-Assistant Surgeon, Local Fund Dispensary.	Pulliput	House-rent	7	
124. Do.	Palmaner	Do.	6	
125. Do.	Chandragiri	Do.	5	
126. Do.	Kalahasti	Do.	5	
127. Do.	Puttur	....	Free quarters.	
128. Do.	Tiruttani	....	Do.	
129. Sub-Assistant Surgeon, Local Fund Hospital (1).	Madanapalle	....	Do.	
130. Sub-Assistant Surgeon, Local Fund Dispensary.	Sadam	....	Do.	
131. Sub-Assistant Surgeon, Municipal Hospital (1).	Tirupati	....	Do.	
132. Sub-Assistant Surgeon, Local Fund Dispensary.	Punganur	....	....	
133. Do.	Vayalpad	....	....	
134. Do.	Venkatagirikota	....	....	Closed from 1st September 1922.
COIMBATORE.				
<i>(a) Paid by Government.</i>				
135. Sub-Assistant Surgeon, Headquarter Hospital (1).	Coimbatore	House-rent	15	
136. Reserve Sub-Assistant Surgeons, Headquarter Hospital (2).	Do.	Do.	10	
137. Sub-Assistant Surgeon, Headquarter Hospital.	Do.	....	Free quarters.	
138. Sub-Assistant Surgeons, Central Jail (2).	Do.	....	Do.	
139. Sub-Assistant Surgeon, District Jail (1).	Do.	....	Do.	
140. Sub-Assistant Surgeon, Police Hospital (1).	Do.	....	Do.	
141. Sub-Assistant Surgeon attached to the Forest and Agricultural Colleges (1).	Do.	....	....	
142. Sub-Assistant Surgeon, Police Hospital (1).	Kollegal	....	....	Held by Civil Assistant Surgeon.
<i>(b) Paid by local bodies.</i>				
143. Lady Sub-Assistant Surgeon, Local Fund Hospital (1).	Gobichettipalayam	House-rent	10	
144. Sub-Assistant Surgeon, Local Fund Hospital (1).	Satyamangalam	Do.	8	
145. Sub-Assistant Surgeon, Local Fund Dispensary.	Kottur	Do.	8	
146. Do.	Palladam	Do.	7	
147. Do.	Kangayam	Do.	7	
148. Do.	Andiyur	Do.	7	
149. Do.	Vettagaranpudur	Do.	6	
150. Do.	Sulur	Do.	5	
151. Do.	Hanur	Do.	2½	
152. Do.	Avanashi	....	Free quarters.	
153. Do.	Perundurai	....	Do.	
154. Sub-Assistant Surgeon, Local Fund Hospital (1).	Bhavani	....	Do.	
155. Sub-Assistant Surgeon, Local Fund Dispensary.	Nerinjipet	....	Do.	
156. Sub-Assistant Surgeon, Local Fund Dispensary.	Talavadi	....	Do.	
157. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Coimbatore	....	Do.	
158. Sub-Assistant Surgeon, Municipal Hospital (1).	Dharapuram	....	Do.	
159. Lady Sub-Assistant Surgeon, Municipal Hospital (1).	Erode	....	Do.	
160. Lady Sub-Assistant Surgeon, Women and Children Dispensary.	Pollachi	....	....	
161. Sub-Assistant Surgeon, Local Fund Dispensary.	Thondamuthur	....	....	
162. Local Fund Hospital	Mettupalaiyam	....	....	Held by Civil Assistant Surgeon.
163. Do.	Kollegal	....	....	Do.
164. Municipal Hospital	Erode	....	....	Do.
165. Do.	Pollachi	....	....	Do.
166. Do.	Tiruppur	....	....	Do.
167. Do.	Udamalpet	....	....	Do.
168. Women and Children Dispensary.	Do.	....	....	Held by Lady Apothecary.
169. Lady Sub-Assistant Surgeon, Women and Children Dispensary.	Dharapuram	....	....	Vacant.

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem. RS.	Remarks.
CUDDAPAH.				
<i>(a) Paid by Government.</i>				
170. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Cuddapah	House-rent ..	5	
171. Reserve Sub-Assistant Surgeons, Headquarter Hospital (4).	Do.	Do. ..	5 each.	
172. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Do. .. ..	....	Free quarters.	
173. Sub-Assistant Surgeon, Collector's establishment.	Do. .. ..	....	....	
<i>(b) Paid by local bodies.</i>				
174. Sub-Assistant Surgeon, Local Fund Dispensary.	Vonipenta	House-rent ..	4	
175. Do. do. Badvel .. ..	....	....	Free quarters.	
176. Do. do. Siddhout .. ..	....	....	Do.	
177. Do. do. Jammalamadagu .. ..	....	....	Do.	
178. Sub-Assistant Surgeon, Local Fund Hospital (1).	Rajampet .. ..	....	Do.	
179. Sub-Assistant Surgeon, Local Fund Dispensary.	Rayaahoti .. ..	....	Do.	
180. Do. do. Vaimpalli .. ..	....	....	Do.	
181. Sub-Assistant Surgeon, Municipal Hospital (1).	Proddatur .. ..	....	Do.	
182. Sub-Assistant Surgeon, Local Fund Dispensary.	Pulivondla .. ..	....	....	
183. Do. do. Porumamilla .. ..	....	....	....	
GANJAM.				
<i>(a) Paid by Government.</i>				
184. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Berhampur	House-rent ..	10	
185. Reserve Sub-Assistant Surgeons, Headquarter Hospital (4).	Do.	Do. ..	10 each.	
186. Midwife, Headquarter Hospital ..	Do.	Do. ..	1½	
187. Sub-Assistant Surgeons, Head-quarter Hospital (2).	Do. .. ..	....	Free quarters.	
188. Sub-Assistant Surgeon, District Jail (1).	Do. .. ..	....	Do.	
<i>(b) Paid by local bodies.</i>				
189. Sub-Assistant Surgeon, Local Fund Dispensary.	Gopalpur	House-rent ..	8	
190. Sub-Assistant Surgeon, Local Fund Hospital (sub-charge) (1).	Russellkonda	Do. ..	8	
191. Sub-Assistant Surgeon, Local Fund Dispensary.	Aska	Do. ..	7½	
192. Do. do. Pulasara	Do. ..	Do. ..	5	
193. Do. do. Varanasi	Do. ..	Do. ..	5	
194. Do. do. Serugada	Do. ..	Do. ..	5	
195. Do. do. Jarada .. ..	....	....	Free quarters.	
196. Do. do. Sompeta .. ..	....	....	Do.	
197. Do. do. Ganjam .. ..	....	....	Do.	
198. Do. do. Kallikota .. ..	....	....	Do.	
199. Do. do. Purushottapur .. ..	....	....	Do.	
200. Do. do. Calingapatam .. ..	....	....	Do.	
201. Do. do. Narasannapet .. ..	....	....	Do.	
202. Do. do. Dharakota .. ..	....	....	Do.	
203. Do. do. Surada .. ..	....	....	Do.	
204. Sub-Assistant Surgeon, Municipal Hospital (1).	Chicacole .. ..	....	Do.	
205. Do. do. Parlakimedi .. ..	....	....	Do.	
206. Sub-Assistant Surgeon, Local Fund Dispensary.	Baruva .. ..	....	....	
207. Do. do. Ichchapuram .. ..	....	....	....	
208. Do. do. Hiramandalam .. ..	....	....	....	
209. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Berhampur .. ..	....	....	
210. Local Fund Hospital	Chatrapur .. ..	....	....	Held by Civil Assistant Surgeon.
211. Do.	Tekkali .. ..	....	....	Do.
212. Do.	Russellkonda .. ..	....	....	Held by Military Assistant Surgeon.
213. Local Fund Dispensary	Garabanda .. ..	....	....	Closed from 30th July 1922.
GODAVARI.				
<i>(a) Paid by Government.</i>				
214. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Cocanada	House-rent ..	12	
215. Reserve Sub-Assistant Surgeons, Headquarter Hospital (4).	Do.	Do. ..	12 each.	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem. RS.	Remarks.
GODAVARI—cont.				
<i>(b) Paid by Government—cont.</i>				
216. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Cocanada .. ..	....	Free quarters.	
217. Sub-Assistant Surgeons, Central Jail (2).	Rajahmundry .. ..	....	....	
<i>(b) Paid by local bodies.</i>				
218. Sub-Assistant Surgeons, Municipal Hospital (2).	Rajahmundry	House-rent ..	14 each.	
219. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Cocanada	Do. ..	12	
220. Sub-Assistant Surgeon, Local Fund Hospital (1).	Tuni	Do. ..	12	
221. Sub-Assistant Surgeon, Local Fund Dispensary.	Razole	Do. ..	8	
222. Sub-Assistant Surgeon, Municipal Hospital (1).	Peddapuram	Do. ..	6	
223. Sub-Assistant Surgeon, Local Fund Dispensary.	Mandapeta	Do. ..	5	
224. Do. do. Bicavole .. ..	....	Do. ..	5	
225. Do. do. Mummidivaram .. ..	....	Do. ..	5	
226. Do. do. Prattipadu .. ..	....	....	Free quarters.	
227. Do. do. Tallarevu .. ..	....	....	Do.	
228. Do. do. Bendamurlanka .. ..	....	....	Do.	
229. Do. do. Dowlaishwaram .. ..	....	....	Do.	
230. Do. do. Gokavaram .. ..	....	....	....	
231. Do. do. Yeleswaram .. ..	....	....	....	
232. Lady Sub-Assistant Surgeon, Gosha Hospital (1).	Tuni .. ..	....	....	
233. Sub-Assistant Surgeon, Local Fund Dispensary.	Kottapeta .. ..	....	....	
234. Lady Havelock's Hospital for Women and Children.	Cocanada .. ..	....	....	Held by Lady Apothecary.
235. Local Fund Hospital	Pithapuram .. ..	....	....	Held by Civil Assistant Surgeon.
236. Do.	Amalapuram .. ..	....	....	Do.
237. Do.	Ramachandrapuram .. ..	....	....	Do.
GUNTUR.				
<i>(a) Paid by Government.</i>				
238. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Guntur	House-rent ..	7	
239. Reserve Sub-Assistant Surgeons, Headquarter Hospital (3).	Do.	Do. ..	7 each.	
240. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Do. .. ..	....	Free quarters.	
<i>(b) Paid by local bodies.</i>				
241. Sub-Assistant Surgeon, Municipal Hospital (1).	Tenali	House-rent ..	8	
242. Sub-Assistant Surgeon, Local Fund Dispensary.	Ponnur	Do. ..	7	
243. Do. do. Achampeta .. ..	....	Do. ..	5	
244. Do. do. Gurzala .. ..	....	Do. ..	5	
245. Do. do. Macherla .. ..	....	Do. ..	5	
246. Do. do. Addanki .. ..	....	Do. ..	5	
247. Do. do. Kottapatam .. ..	....	Do. ..	5	
248. Do. do. Kollur .. ..	....	Do. ..	3	
249. Do. do. Dachepalle .. ..	....	....	Free quarters.	
250. Do. do. Bapatla .. ..	....	....	Do.	
251. Do. do. Mangalagiri .. ..	....	....	Do.	
252. Do. do. Sattenapalle .. ..	....	....	Do.	
253. Do. do. Vinakonda .. ..	....	....	Do.	
254. Do. do. Repalle .. ..	....	....	....	
255. Municipal Hospital	Chirala .. ..	....	....	Held by Civil Assistant Surgeon.
256. Do.	Narasaraopet .. ..	....	....	Do.
257. Do.	Ongole .. ..	....	....	Do.
258. Municipal Gosha Hospital	Do. .. ..	....	....	Held by Lady Apothecary.
SOUTH KANARA.				
<i>(a) Paid by Government.</i>				
259. Midwife, Women and Children Hospital (1).	Mangalore	House-rent ..	3	
260. Sub-Assistant Surgeon, Government Dispensary.	Amindivi .. ..	....	Free quarters.	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
SOUTH KANARA—cont.				
(a) Paid by Government—cont.				
261. Sub-Assistant Surgeon, Police Hospital (1).	Mangalore .. ..	....	Free quarters.	
262. Sub-Assistant Surgeons, Head-quarter Hospital (2).	Do. .. ..	....	Do.	
263. Government Women and Children Hospital.	Do. .. ..	....	Do.	Held by Lady Apothecary.
(b) Paid by local bodies.				
264. Sub-Assistant Surgeon, Local Fund Dispensary.	Baindur	House-rent	5	
265. Do.	Shankaranarayana	Do.	5	
266. Do.	Manjeshwar	Do.	5	
267. Do.	Mudabidri .. ..	....	Free quarters.	
268. Do.	Mulki .. ..	....	Do.	
269. Do.	Sullia .. ..	....	Do.	
270. Do.	Hosdurg .. ..	....	....	
271. Do.	Beltangadi .. ..	....	....	
272. Do.	Uppinangadi .. ..	....	....	
273. Local Fund Hospital	Coondapur .. ..	....	....	Held by Civil Assistant Surgeon.
274. Do.	Karkal .. ..	....	....	Do.
275. Do.	Kasaragod .. ..	....	....	Do.
276. Do.	Bantval .. ..	....	....	Do.
277. Do.	Udipi .. ..	....	....	Do.
278. Do.	Puttur .. ..	....	....	Do.

KISTNA.

(a) Paid by Government.

279. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Masulipatam	House-rent	12	
280. Reserve Sub-Assistant Surgeons, Headquarter Hospital (4).	Do.	Do.	8	
281. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Do. .. ..	....	Free quarters.	

(b) Paid by local bodies.

282. Sub-Assistant Surgeon, Local Fund Dispensary.	Kovur	House-rent	..	
283. Do.	Kaikalur	Do.	8	
284. Do.	Nidadavole	Do.	7½	
285. Do.	Bantemili	Do.	5	
286. Sub-Assistant Surgeon, Local Fund Hospital (1).	Gudivada	Do.	5	
287. Sub-Assistant Surgeon, Local Fund Dispensary.	Pamaruru	Do.	5	
288. Do.	Achanta	Do.	5	
289. Sub-Assistant Surgeon, Municipal Dispensary.	Palacole	Do.	5	
290. Sub-Assistant Surgeon, Municipal Women and Children Dispensary.	Masulipatam	Do.	5	
291-a. Sub-Assistant Surgeon, Local Fund Dispensary.	Avanigadda .. ..	....	Free quarters.	
292. Do.	Gunnaravaram .. ..	....	Do.	
293. Do.	Jaggayyapet .. ..	....	Do.	
294. Do.	Mallavaram .. ..	....	Do.	
295. Do.	Nuzvid .. ..	....	Do.	
296. Do.	Tiruvur .. ..	....	Do.	
297. Do.	Bhimavaram .. ..	....	Do.	
298. Sub-Assistant Surgeon, Municipal Hospital (1).	Bezvada .. ..	....	Do.	
299. Do.	Ellore .. ..	....	Do.	
300. Sub-Assistant Surgeon, Local Fund Dispensary.	Nandigama .. ..	....	....	
301. Do.	Chintalapudi .. ..	....	....	
302. Local Fund Hospital	Narasapur .. ..	....	....	Held by Civil Assistant Surgeon.
303. Do.	Tanuku .. ..	....	....	Do.

KURNOOL.

(a) Paid by Government.

304. Sub-Assistant Surgeon, Head-quarter Hospital (1).	Kurnool	House-rent	8	
305. Reserve Sub-Assistant Surgeons, Headquarter Hospital (6).	Do.	Do.	5 each.	
306. Sub-Assistant Surgeon attached to the Special Benchu Officer.	Atmakur	Do.	5	
307. Sub-Assistant Surgeon, Police Hospital (1).	Kurnool .. ..	....	Free quarters.	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
KURNOOL—cont.				
(b) Paid by local bodies.				
308. Sub-Assistant Surgeon, Municipal Hospital (1).	Nandyal	House-rent	7	
309. Sub-Assistant Surgeon, Local Fund Dispensary.	Guntur	Do.	6	
310. Do.	Kodumur	Do.	6	
311. Do.	Giddalur	Do.	5	
312. Do.	Pattikonda	Do.	5	
313. Do.	Allagadda	Do.	5	
314. Do.	Cumbum	Do.	5	
315. Do.	Nandikotkur	Do.	4½	
316. Do.	Koilkuntla	Do.	4	
317. Do.	Madhikera	Do.	4	
318. Do.	Owk	Do.	4	
319. Do.	Markapur	Do.	4	
320. Do.	Yerragondapalem	Do.	4	
321. Do.	Atmakur	Do.	3	
322. Do.	Peapalli	Do.	Free quarters.	
323. Do.	Dhone .. ..	....	....	
MADRAS.				
324. Sub-Assistant Surgeon, Tuberculosis Institute (1).	Madras	House-rent.	15	
325. Sub-Assistant Surgeons, General Hospital (2).	Do.	Do.	15	
326. Sub-Assistant Surgeon, Maternity Hospital (1).	Do.	Do.	15	
327. Sub-Assistant Surgeon, Leper Hospital (1).	Do.	Do.	15	
328. Sub-Assistant Surgeons, Rayapuram Hospital and Medical School (8).	Do.	Do.	15	
329. Sub-Assistant Surgeons, Royapetta Hospital (3).	Do. .. ..	....	Free quarters.	
330. Sub-Assistant Surgeons, Ophthalmic Hospital (5).	Do. .. ..	....	Do.	
331. Sub-Assistant Surgeon, Lunatic Asylum (1).	Do. .. ..	....	Do.	
332. Sub-Assistant Surgeons, Penitentiary (2).	Do. .. ..	....	Do.	
333. Sub-Assistant Surgeon, Royapuram Hospital and Medical School (1).	Do. .. ..	....	Do.	
334. Sub-Assistant Surgeon, Raja Sir Ramaswami Mudaliyar's Lying-in-Hospital (1).	Do. .. ..	....	....	
335. Reserve Sub-Assistant Surgeons, General Hospital (4).	Do. .. ..	....	....	
336. Sub-Assistant Surgeon, Marine Dispensary.	Do. .. ..	....	Free quarters.	
337. Matron, Government Maternity Hospital.	Do. .. ..	....	Do.	
338. Assistant Matrons, Government Maternity Hospital (2).	Do. .. ..	....	Do.	
339. Nurses, Government Maternity Hospital (3).	Do. .. ..	....	Do.	
340. Linen-keeper, Government Maternity Hospital.	Do. .. ..	....	Do.	
341. Midwives, Government Maternity Hospital (4).	Do. .. ..	....	Do.	
342. Probationary nurses, Government Maternity Hospital.	Do. .. ..	....	Do.	
343. European attendants, Lunatic Asylum.	Do. .. ..	....	....	
344. Matron, Lunatic Asylum	Do. .. ..	....	Free quarters.	
345. First-grade nurse, Lunatic Asylum.	Do. .. ..	....	Do.	
346. Indian attendants, Lunatic Asylum	Do. .. ..	....	Do.	
347. Matron Superintendent, Government General Hospital.	Do. .. ..	....	Do.	
348. Assistant Matron Superintendent, Government General Hospital.	Do. .. ..	....	Do.	
349. Nurses, Government General Hospital (36).	Do. .. ..	....	Do.	
350. Hospital Sergeant, Government General Hospital.	Do. .. ..	....	Do.	
351. Matron, Government Voluntary Venereal Hospital.	Do. .. ..	....	Do.	
352. Nursing staff, Victoria Caste and Gosha Hospital.	Do. .. ..	....	100.	
353. Pupil midwives, Victoria Caste and Gosha Hospital	Do. .. ..	....	100.	
354. Ward attendants and totis, Victoria Caste and Gosha Hospital.	Do. .. ..	....	....	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
MADRAS—cont.				
355. Nursing staff (matron and nurses), Royapetta Hospital.	Madras	.. ..	Rs. Free-quarters.	
356. Tuberculosis Hospital	Do.	.. ..	....	Held by Civil Assistant Surgeon.
357. Government House Dispensary ..	Do.	.. ..	....	Held by Military Assistant Surgeon.
MADURA.				
<i>(a) Paid by Government.</i>				
358. Reserve Sub-Assistant Surgeons, Headquarter Hospital (3).	Madura	 House-rent	.. 10 each ..	
359. Sub-Assistant Surgeons, Headquarter Hospital (4).	Do.	.. ..	....	
360. Lady Sub-Assistant Surgeon, Headquarter Hospital (1).	Do.	.. ..	....	
361. Sub-Assistant Surgeon, District Jail (1).	Do.	.. ..	....	
362. Public Works Department Dispensary.	Tekkadi	.. ..	....	
363. Indian nurses, Government Headquarter Hospital.	Madura	.. ..	....	Free quarters. } Quarters are rented by the Government.
364. Female compounders, Government Headquarter Hospital.	Do.	.. ..	....	Do.
365. Sub-Assistant Surgeon, Local Fund Dispensary.	Tirumangalam	 House-rent	.. 15	
366. Do.	Tiruparangundram	 Do.	.. 10	
367. Do.	Andipatti	 Do.	.. 10	
368. Do.	Vedasandur	 Do.	.. 10	
369. Do.	Alanganallur	 Do.	.. 8	
370. Do.	Keeranur	 Do.	.. 5	
371. Do.	Saptur	 Do.	.. 4½	
372. Do.	Usilampatti	.. ..	Free quarters.	
373. Do.	Uttamapalaiyam	.. ..	Do.	
374. Do.	Batlagundu	.. ..	Do.	
375. Do.	Kannivadi	.. ..	Do.	
376. Do.	Nilakkottai	.. ..	Do.	
377. Do.	Sbolavandan	.. ..	Do.	
378. Lady Sub-Assistant Surgeon, Municipal Women and Children Dispensary.	Dindigul	.. ..	Do.	
379. Sub-Assistant Surgeon, Municipal Hospital (1).	Bodinayakkanur	.. ..	Do.	
380. Sub-Assistant Surgeon, Municipal Dispensary.	Madura	.. ..	Do.	
381a. Do.	Tallakulam	.. ..	Do.	
382. Sub-Assistant Surgeon, Local Fund Dispensary.	Melur	.. ..	....	
383. Do.	Nattam	.. ..	....	
384. Sub-Assistant Surgeon, Municipal Hospital (1).	Dindigul	.. ..	....	
385. Municipal Hospital	Kodaikanal	.. ..	....	Held by Civil Assistant Surgeon.
386. Do.	Palni	.. ..	....	Do.
387. Do.	Periyakulam	.. ..	....	Do.
388. Rao Bahadur M. S. Narayana-swami Ayyar's Women and Children Dispensary.	Madura	.. ..	....	Held by Lady Apothecary.

MALABAR.*(a) Paid by Government.*

389. Reserve Sub-Assistant Surgeons, Headquarter Hospital (5).	Calicut	 House-rent	.. 10
390. Sub-Assistant Surgeon, Women and Children Hospital (1).	Do.	 Do.	.. 10
391. Lady Sub-Assistant Surgeon, Women and Children Hospital (1).	Do.	 Do.	.. 10
392. Sub-Assistant Surgeons, Police Hospital (2).	Malappuram	 Do.	.. 5
393. Sub-Assistant Surgeons, Medical School (2).	Calicut	 Do.	.. 5
394. Sub-Assistant Surgeon, Headquarter Hospital (1).	Do.	.. ..	Free quarters.
395. Sub-Assistant Surgeon, Sub-jail (1).	Do.	.. ..	Do.
396. Sub-Assistant Surgeons, Central Jail (2).	Cannanore	.. ..	....
397. Sub-Assistant Surgeons, Cantonment Sub-jail (2).	Do.	.. ..	....
398. Sub-Assistant Surgeon, Fort Sub-jail.	Do.	.. ..	....

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
MALABAR—cont.				
<i>(a) Paid by Government—cont.</i>				
399. Sub-Assistant Surgeon, Lunatic Asylum.	Calicut	.. ..	....	Held by Civil Assistant Surgeon.
<i>(b) Paid by local bodies.</i>				
400. Sub-Assistant Surgeon, Local Fund Dispensary.	Valapad	 House-rent	.. 12	
401. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Kallai	 Do.	.. 10	
402. Sub-Assistant Surgeons, Municipal Hospital (2).	Cochin	 Do.	.. 10	
403. Sub-Assistant Surgeon, Municipal Dispensary.	Cannanore	 Do.	.. 8	
404. Sub-Assistant Surgeon, Local Fund Dispensary.	Alattur	 Do.	.. 7½	
405. Do.	Kollengode	 Do.	.. 7½	
406. Do.	Badagara	 Do.	.. 7	
407. Do.	Trithala	 Do.	.. 5	
408. Do.	Irikkur	 Do.	.. 5	
409. Do.	Payyanur	 Do.	.. 5	
410. Do.	Taliparamba	 Do.	.. 5	
411. Do.	Kalikavu	 Do.	.. 5	
412. Do.	Kuttaparamba	 Do.	.. 5	
413. Do.	Nadapuram	 Do.	.. 5	
414. Do.	Quilandi	 Do.	.. 5	
415. Do.	Kannambra	 Do.	.. 5	
416. Sub-Assistant Surgeon, Local Fund Dispensary.	Tirur	.. ..	5	
417. Do.	Mannarghat	 Do.	Free quarters.	
418. Do.	Tamracheri	.. ..	Do.	
419. Sub-Assistant Surgeon, Local Fund Hospital (1).	Vayittiri	.. ..	....	
420. Sub-Assistant Surgeon, Local Fund Dispensary.	Sultan's Battery	.. ..	Do.	
421. Sub-Assistant Surgeon, Municipal Hospital (1).	Palghat	.. ..	....	
422. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Do.	.. ..	....	
423. Sub-Assistant Surgeon, Municipal Hospital (1).	Tellocherry	.. ..	....	
424. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Do.	.. ..	....	
425. Local Fund Hospital	Manjeri	.. ..	....	Held by Civil Assistant Surgeon.
426. Do.	Nilambar	.. ..	....	Held by Local Fund Assistant Surgeon.
427. Do.	Chowghat	.. ..	....	Held by Civil Assistant Surgeon.
428. Do.	Ponnani	.. ..	....	Do.
429. Do.	Angadipuram	.. ..	....	Do.
430. Do.	Manantoddy	.. ..	....	Do.
NELLORE.				
<i>(a) Paid by Government.</i>				
431. Reserve Sub-Assistant Surgeon, Headquarter Hospital (2).	Nellore	 House-rent	.. 5	
432. Indian Nurses, Headquarter Hospital (2).	Do.	 Do.	.. 5	
433. Sub-Assistant Surgeons, Headquarter Hospital (2).	Do.	.. ..	Free quarters.	
<i>(b) Paid by local bodies.</i>				
434. Sub-Assistant Surgeon, Local Fund Dispensary.	Mutukur	 House-rent	.. 8	
435. Do.	Nayudupet	 Do.	.. 8	
436. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Nellore	 Do.	.. 8	
437. Sub-Assistant Surgeon, Local Fund Dispensary.	Kovur	 Do.	.. 6	
438. Do.	Vinjamur	 Do.	.. 5	
439. Do.	Podalakur	 Do.	.. 5	
440. Do.	Pamur	 Do.	.. 5	
441. Do.	Podili	 Do.	.. 5	
442. Do.	Indukurpet	 Do.	.. 5	
443. Sub-Assistant Surgeon, Local Fund Hospital (1).	Atmakur	.. ..	Free quarters.	
444. Sub-Assistant Surgeon, Local Fund Dispensary.	Kaluvaya	.. ..	Do.	
445. Do.	Udayagiri	.. ..	Do.	
446. Do.	Dugara-japatnam	.. ..	Do.	
447. Sub-Assistant Surgeon, Local Fund Hospital (1).	Gudur	.. ..	Do.	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
NELLORE—cont.				
(b) Paid by local bodies—cont.				
448. Sub-Assistant Surgeon, Local Fund Dispensary.	Kota .. ..	....	Free quarters	
449. Do. do.	Rapur .. ..	....	Do.	
450. Sub-Assistant Surgeon, Local Fund Hospital (1).	Kandukur .. ..	....	Do.	
451. Sub-Assistant Surgeon, Local Fund Dispensary.	Darsi .. ..	....	Do.	
452. Sub-Assistant Surgeon, Local Fund Hospital (1).	Kanigiri .. ..	....	Do.	
453. Do. do.	Allur .. ..	....	Do.	
454. Sub-Assistant Surgeon, Local Fund Dispensary.	Buohireddipalaiyam ..	....	Do.	
455. Sub-Assistant Surgeon, Local Fund Hospital (1).	Kavali .. ..	....	Do.	
456. Sub-Assistant Surgeon, Local Fund Dispensary.	Sulurpet .. ..	....	Do.	
457. Lady Sub-Assistant Surgeon (1), Women and Children Jubilee Hospital.	Nellore .. ..	....	Do.	
458. Local Fund Hospital	Venkatagiri .. ..	....	....	Held by Assistant Civil Surgeon.
NILERIS.				
(a) Paid by Government.				
459. Matron (1), Government Head-quarter Hospital.	Ootacamund	House-rent ..	50	
460. Reserve Sub-Assistant Surgeon (1), Headquarter Hospital.	Do.	Do. ..	....	
461. St. Bartholomew's Headquarter Hospital.	Do.	Do. ..	30	
462. Indian Nurses (2), Headquarter Hospital.	....	Do. ..	5	
463. Compounders (2), Headquarter Hospital.	....	Do. ..	5	
464. Sub-Assistant Surgeon (1), Head-quarter Hospital.	....	....	Free quarters	
(b) Paid by local bodies.				
465. Reserve Sub-Assistant Surgeon (1), Lawley Hospital.	Coonoor	House-rent ..	30	
466. Sub-Assistant Surgeons (2), Lawley Hospital.	Do. .. ..	....	Free quarters	
467. Sub-Assistant Surgeon (1), Local Fund Hospital.	Kolacombai .. ..	....	Do.	
468. Sub-Assistant Surgeon, Local Fund Dispensary.	Kaity .. ..	....	....	
469. Local Fund Hospital	Gudalur .. ..	....	....	Held by Military Assistant Surgeon.
470. Do.	Kotagiri .. ..	....	....	Do.
RAMNAD.				
(a) Paid by Government.				
471. Reserve Sub-Assistant Surgeons (2), Headquarter Hospital.	Ramnad	House-rent ..	10	
472. Nurse on Plague duty	Dhanushkodi	Do. ..	10	
473. Sub-Assistant Surgeon, Head-quarter Hospital.	Ramnad .. ..	....	Free quarters	
474. Sub-Assistant Surgeon, Special Police Force.	Sivakasi .. ..	....	Do.	
(b) Paid by local bodies.				
475. Sub-Assistant Surgeon, Local Fund Hospital.	Sattur	House-rent ..	15	
476. Sub-Assistant Surgeon, Local Fund Dispensary.	Arappukkottai	Do. ..	10	
477. Do. do.	Dhanushkodi	Do. ..	10	
478. Do. do.	Ilayangudi	Do. ..	10	
479. Do. do.	Mudukulattur	Do. ..	10	
480. Do. do.	Paramagudi	Do. ..	10	
481. Do. do.	Kamudi	Do. ..	9	
482. Do. do.	Tiruppuvanam	Do. ..	8	
483. Do. do.	Kilakarai	Do. ..	8	
484. Do. do.	Watrap	Do. ..	8	
485. Sub-Assistant Surgeon, Municipal Hospital.	Srivilliputtur	Do. ..	8	
486. Sub-Assistant Surgeon, Local Fund Dispensary.	Kottayur	Do. ..	8	
487. Do. do.	Abiramam	Do. ..	6	
488. Do. do.	Tondi	Do. ..	5	
489. Do. do.	Mandapam	Do. ..	5	
490. Do. do.	Rajapalaiyam	Do. ..	5	
491. Do. do.	Manamadurai .. ..	....	Free quarters	
492. Do. do.	Tirupattur .. ..	....	Do.	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
RAMNAD—cont.				
(b) Paid by local bodies—cont.				
493. Sub-Assistant Surgeon, Municipal Hospital (1).	Srivilliputtur .. ..	....	Free quarters.	
494. Sub-Assistant Surgeon, Municipal Dispensary.	Sivakasi .. ..	....	Do.	
495. Sub-Assistant Surgeon, Local Fund Dispensary.	Devakottai .. ..	....	Do.	
496. Do. do.	Karakudi .. ..	....	....	
497. Sub-Assistant Surgeon, Local Fund Hospital (1).	Rameswaram .. ..	....	....	
498. Do. do.	Sivaganga .. ..	....	....	Held by Assistant Civil Surgeon.
499. Do. do.	Pamban .. ..	....	....	Do.
500. Municipal Hospital	Virudupatti .. ..	....	....	Do.
501. Women and Children Dispensary.	Devakottai .. ..	....	....	Held by Lady Apothecary.
SALEM.				
(a) Paid by Government.				
502. Sub-Assistant Surgeons (3), Central jail.	Salem .. ..	....	Free quarters.	
503. Sub-Assistant Surgeon (1), Police Hospital.	Do. .. ..	....	Do.	
504. Sub-Assistant Surgeons (3), Head-quarter Hospital.	Do. .. ..	....	Do.	
505. Lady Sub-Assistant Surgeon, Queen Alexandra Hospital (1).	Do. .. ..	....	....	
506. Reserve Sub-Assistant Surgeons (2), Headquarter Hospital.	Do. .. ..	....	....	
(b) Paid by local bodies.				
507. Sub-Assistant Surgeon, Local Fund Hospital (1).	Tiruchengodu	House-rent ..	15	
508. Sub-Assistant Surgeon, Municipal Branch Dispensary, Ammapet.	Salem	Do. ..	10	
509. Sub-Assistant Surgeon, Local Fund Dispensary.	Rasipur	Do. ..	10	
510. Do. do.	Shendamangalam	Do. ..	10	
511. Do. do.	Velur	Do. ..	8	
512. Do. do.	Palakodu	Do. ..	8	
513. Do. do.	Kaveripattanam	Do. ..	7	
514. Sub-Assistant Surgeon, Local Fund Hospital (1).	Harur	Do. ..	7	
515. Sub-Assistant Surgeon, Local Fund Dispensary.	Mattur	Do. ..	7	
516. Do. do.	Ettapur	Do. ..	7	
517. Do. do.	Omair	Do. ..	6	
518. Do. do.	Edappadi	Do. ..	6	
519. Do. do.	Pennagaram	Do. ..	6	
520. Do. do.	Uttangarai	Do. ..	6	
521. Do. do.	Denkanikota	Do. ..	6	
522. Do. do.	Rayakota	Do. ..	6	
523. Do. do.	Thammampatti	Do. ..	5	
524. Do. do.	Thalli	Do. ..	5	
525. Do. do.	Sankaridrug .. ..	....	Free quarters.	
526. Local Fund Hospital	Dharmapuri .. ..	....	....	Held by Assistant Civil Surgeon.
527. Do.	Hosur .. ..	....	....	Do.
528. Do.	Krishnagiri .. ..	....	....	Do.
529. Do.	Namakkal .. ..	....	....	Do.
530. Do.	Yercaud .. ..	....	....	Do.
TANJORE.				
(a) Paid by Government.				
531. Sub-Assistant Surgeons (3), Medical School and Headquarter Hospital.	Tanjore	House-rent ..	10	
532. Reserve Sub-Assistant Surgeons (2), Headquarter Hospital.	Do.	Do. ..	10	
533. Reserve Sub-Assistant Surgeon (1), Headquarter Hospital.	Do. .. ..	....	Free quarters.	
534. Sub-Assistant Surgeon (1), Borstal Institute.	Do. .. ..	....	Do.	
(b) Paid by local bodies.				
535. Sub-Assistant Surgeon, Municipal Dispensary.	Karuntattangudi	House-rent ..	10	
536. Sub-Assistant Surgeon, Local Fund Dispensary.	Swamimalai	Do. ..	8	
537. Do. do.	Kivalur	Do. ..	8	
538. Do. do.	Ammapet	Do. ..	5	
539. Do. do.	Milattur	Do. ..	5	
540. Do. do.	Tiruppanandal	Do. ..	5	
541. Do. do.	Valangiman	Do. ..	5	

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
TANJORE—cont.				
(b) Paid by local bodies—cont.				
542. Sub-Assistant Surgeon, Local Fund Dispensary.	Vaithisvarankoil	House-rent	5	
543. Do. do.	Perumpanniyur	Do.	5	
544. Do. do.	Vidayapuram	Do.	5	
545. Do. do.	Vedaranniyam	Do.	5	
546. Do. do.	Ayyampet	Do.	5	
547. Do. do.	Tiruvadi	Do.	5	
548. Do. do.	Avadaiyarkovil	Do.	8	
549. Do. do.	Enangudi	Do.	8	
550. Do. do.	Nachiyarkovil	Free quarters.		
551. Do. do.	Papanasam	Do.		
552. Do. do.	Tiruvadamardur	Do.		
553. Do. do.	Kuttalam	Do.		
554. Do. do.	Kodavasal	Do.		
555. Sub-Assistant Surgeon, Local Fund Hospital (1).	Nannilam	Do.		
556. Sub-Assistant Surgeon, Local Fund Dispensary.	Kuttanelore	Do.		
557. Do. do.	Adirampatnam	Do.		
558. Do. do.	Aranthangi	Do.		
559. Do. do.	Manamelgudi	Do.		
560. Do. do.	Minisal	Do.		
561. Do. do.	Nidamanagalam	Do.		
562. Do. do.	Orattanadu	Do.		
563. Do. do.	Tirukattupalli	Do.		
564. Do. do.	Vallam	Do.		
565. Sub-Assistant Surgeon, Municipal Dispensary.	Manambuchavadi	Do.		
566. Sub-Assistant Surgeons, Municipal Hospital (2).	Kumbakonam	Do.		
567. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Do.	Do.		
568. Sub-Assistant Surgeon, Municipal Hospital (1).	Mayavaram	Do.		
569. Sub-Assistant Surgeons, Municipal Hospital (2).	Negapatam	Do.		
570. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Nagore	Do.		
571. Sub-Assistant Surgeon, Local Fund Dispensary.	Peralam	Do.		
572. Do. do.	Muttupet	Do.		
573. Do. do.	Gandavakottai	Do.		
574. Sub-Assistant Surgeon, Municipal Hospital (1).	Mannargudi	Do.		
575. Sub-Assistant Surgeon, Women and Children Dispensary.	Negapatam	Do.		Vacant.
576. Local Fund Hospital	Shiyali	Do.		Held by Civil Assistant Surgeon.
577. Do. do.	Tranquebar	Do.		Do.
578. Do. do.	Tiruturaipundi	Do.		Do.
579. Do. do.	Pattukottai	Do.		Do.
580. Municipal Hospital	Tiruvallur	Do.		Do.
TINNEVELLY.				
(a) Paid by Government.				
581. Reserve Sub-Assistant Surgeons, Headquarter Hospital (3).	Palamcottah	House-rent	5	
582. Sub-Assistant Surgeon, Headquarter Hospital (1).	Do.	Do.		Free quarters
583. Sub-Assistant Surgeon, District Jail (1).	Do.	Do.		Do.
584. Sub-Assistant Surgeon, Police Hospital (1).	Do.	Do.		Do.
585. Sub-Assistant Surgeon, Local Fund Dispensary.	Panakudi	House-rent	10	
586. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Melaviraraghavapuram.	Do.	10	
587. Sub-Assistant Surgeon, Local Fund Dispensary.	Kayattar	Do.	8	
588. Do. do.	Vilattikulam	Do.	8	
589. Do. do.	Sarnadevi	Do.	7½	
590. Do. do.	Kulasekharapatnam.	Do.	7	
591. Do. do.	Sattankulam	Do.	7	
592. Do. do.	Tiruchendur	Do.	7	
593. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Melapalaiyam	Do.	6	
594. Sub-Assistant Surgeon, Local Fund Dispensary.	Ettaiyapuram	Do.	5	
595. Do. do.	Sivagiri	Do.	5	
596. Do. do.	Kadayam	Do.	5	
597. Do. do.	Kadayanallur	Do.	5	
598. Do. do.	Veerkeralambudur.	Do.	5	
599. Do. do.	Kayalpatnam	Do.	5	
600. Do. do.	Kovilpatti	Free quarters.		

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
TINNEVELLY—cont.				
(b) Paid by local bodies.				
601. Sub-Assistant Surgeon, Local Fund Dispensary.	Sankaranayinarkoyil.	Do.	Free quarters.	
602. Do. do.	Tirukarankudi	Do.	Do.	
603. Sub-Assistant Surgeon, Municipal Branch Dispensary.	Pettai	Do.	Do.	
604. Lady Sub-Assistant Surgeon, Municipal Hospital (1).	Tinnevely	Do.	Do.	
605. Sub-Assistant Surgeon, Municipal Hospital (1).	Taticorin	Do.	Do.	
606. Women and Children Hospital	Vannarpet	Do.	Do.	Held by Lady Apothecary.
607. Local Fund Hospital	Ambasamudram	Do.	Do.	Held by Civil Assistant Surgeon.
608. Do. do.	Nanguneri	Do.	Do.	Do.
609. Do. do.	Tenkasi	Do.	Do.	Do.
610. Do. do.	Sriyankuntam	Do.	Do.	Do.
611. Municipal Hospital	Tinnevely	Do.	Do.	Do.
TRICHINOPOLY.				
(a) Paid by Government.				
612. Lady Sub-Assistant Surgeon, Headquarter Hospital (1).	Trichinopoly	House-rent	20	
613. Sub-Assistant Surgeons, Headquarter Hospital (3).	Do.	Do.	12	
614. Sub-Assistant Surgeons, Central Jail (4).	Do.	Do.	Free quarters.	
(b) Paid by local bodies.				
615. Lady Sub-Assistant Surgeon, Municipal Dispensary.	Teppakulam	House-rent	20	
616. Sub-Assistant Surgeon, Local Fund Dispensary.	Kulittalai	Do.	12	
617. Do. do.	Lalgudi	Do.	12	
618. Sub-Assistant Surgeon, Municipal Dispensary.	Teppakulam	Do.	12	
619. Sub-Assistant Surgeon, Local Fund Dispensary.	Musiri	Do.	10	
620. Sub-Assistant Surgeon, Municipal Dispensary.	Woriyar	Do.	10	
621. Sub-Assistant Surgeon, Local Fund Dispensary.	Aravakurohi	Do.	8	
622. Do. do.	Turaiyur	Do.	8	
623. Do. do.	Ariyalur	Do.	8	
624. Do. do.	Jayankondasolapuram.	Do.	8	
625. Do. do.	Manapparai	Do.	7	
626. Do. do.	Kattapputtur	Do.	5	
627. Do. do.	Tathayyangarpettai.	Do.	5	
628. Do. do.	Illuppur	Do.	Free quarters.	
629. Sub-Assistant Surgeon, Municipal Dispensary.	Srirangam	Do.	Do.	
630. Sub-Assistant Surgeon, Local Fund Dispensary.	Perambalur and Kurumbalur.	Do.	Do.	
631. Municipal Hospital	Karur	Do.	Do.	Held by Civil Assistant Surgeon.
632. Women and Children Dispensary.	Do.	Do.	Do.	Held by Lady Assistant Surgeon who draws an house-rent allowance of Rs. 25 from the municipality.
VIZAGAPATAM.				
(a) Paid by Government.				
633. Lady Sub-Assistant Surgeon, Women and Children Hospital (1).	Vizagapatam	House-rent	10	
634. Sub-Assistant Surgeons, Medical School (4).	Do.	Do.	8	
635. Sub-Assistant Surgeons, Headquarter Hospital (2).	Do.	Do.	Free quarters.	
636. Sub-Assistant Surgeons, Central Jail (2).	Do.	Do.	Do.	
637. Sub-Assistant Surgeon, Lunatic Asylum (1).	Do.	Do.	Do.	
Police Hospital	Parvatipuram	Do.	Do.	Held by Civil Assistant Surgeon.
Do.	Narasapatnam	Do.	Do.	Do.

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks
VIZAGAPATAM—cont.				
<i>(b) Paid by local bodies.</i>				
638. Sub-Assistant Surgeon, Local Fund Dispensary.	Nakkapalli ..	House-rent ..	5	
639. Do. do.	Madagole ..	Do. ..	5	
640. Do. do.	Yellamanchili ..	Do. ..	5	
641. Itinerating Dispensary ..	Krishnadevipet ..	Do. ..	5	
642. Sub-Assistant Surgeon, Lakshminarasayyama's Hospital (1).	Kurupam ..	Do. ..	5	
642. Sub-Assistant Surgeon, Local Fund Dispensary.	Jami ..	Do. ..	5	
644. Do. do.	Srungavarapukota ..	Do. ..	5	
645. Sub-Assistant Surgeon, Local Fund Hospital (1).	Pondur ..	Do. ..	5	
646. Sub-Assistant Surgeon, Local Fund Dispensary.	Saluru ..	....	Free quarters.	
647. Do. do.	Kottavala ..	....	Do.	
648. Do. do.	Subbavaram ..	....	Do.	
649. Sub-Assistant Surgeon, Local Fund Hospital (1).	Chipurupalle ..	....	Do.	
650. Do. do.	Gajapatinagaram ..	....	Do.	
651. Do. do.	Palkonda ..	....	Do.	
652. Sub-Assistant Surgeon, Local Fund Dispensary.	Pusapatirega ..	....	Do.	
653. Do. do.	Razam ..	....	Do.	
654. Do. do.	Viraghattam ..	....	Do.	
655. Sub-Assistant Surgeon, Municipal Hospital (1).	Anakapalle ..	....	Do.	
656. Sub-Assistant Surgeon, Edward VII Dispensary.	Vizianagaram ..	....	Do.	
657. Sub-Assistant Surgeon, Municipal Dispensary.	Waltair ..	....	Do.	
658. Sub-Assistant Surgeon, Local Fund Hospital (1).	Chodavaram ..	....	....	
659. Local Fund Hospital ..	Narasapatnam ..	....	....	Held by Civil Assistant Surgeon.
660. Do. ..	Parvatipuram ..	....	....	Do.
661. Do. ..	Bobbili ..	....	....	Do.
662. Women and Children Hospital ..	Do. ..	....	....	Held by Lady Apothecary.
663. Municipal Hospital ..	Bimilipatam ..	....	....	Held by Civil Assistant Surgeon.

AGENCY DIVISION.

(a) Paid by Government.

664. Sub-Assistant Surgeon, Government Hospital (1).	Bhadrachalam ..	House-rent ..	8	
665. Sub-Assistant Surgeon, Assistant Commissioner, Khond Agency.	Russellkonda ..	Do. ..	7	
666. Sub-Assistant Surgeon, Government Dispensary.	Rayagada ..	Do. ..	5	
667. Sub-Assistant Surgeon, Superintendent of Police.	Waltair ..	Do. ..	5	
668. Sub-Assistant Surgeon, Assistant Superintendent of Police, Oriya Agency.	Koraput ..	Do. ..	5	
669. Sub-Assistant Surgeon, Executive Engineer.	Do. ..	Do. ..	5	
670. Sub-Assistant Surgeon, Special Forest Officer, Parlakimedi Maliahs.	Parlakimedi ..	Do. ..	5	
671. Sub-Assistant Surgeon, attached to Agency Commissioner.	Waltair ..	Do. ..	5	
672. Sub-Assistant Surgeon, Assistant Commissioner, Koya Agency.	Bhadrachalam ..	Do. ..	5	
673. Sub-Assistant Surgeon, Ghat Agency.	Waltair ..	Do. ..	5	
674. Sub-Assistant Surgeon, Assistant Commissioner, Rampa Agency.	Polavaram ..	Do. ..	5	
675. Sub-Assistant Surgeon, Government Hospital (1).	Balliguda ..	....	Free quarters.	
676. Do. do.	G. Udayagiri ..	....	Do.	
677. Do. do.	R. do. ..	....	Do.	
678. Sub-Assistant Surgeon, Police and Sub-Jail Hospital sub-charge.	Koraput ..	....	Do.	
679. Sub-Assistant Surgeon, Government Dispensary.	Kunavaram ..	....	Do.	
680. Do. do.	Venkatapur ..	....	Do.	
681. Sub-Assistant Surgeon, Assistant Commissioner, Oriya Agency.	Koraput ..	....	Do.	
682. Sub-Assistant Surgeon, Government Dispensary.	Gazilabadi ..	....	....	
683. Do. do.	Anantagiri ..	....	....	
684. Do. do.	Lammasingi (Tulabada) ..	....	....	
685. Police and Sub-Jail Hospital ..	Koraput ..	....	....	Held by Military Assistant Surgeon.

Non-gazetted officers—cont.

Appointment.	Station.	Existing classification.	Amount of allowance per mensem.	Remarks.
AGENCY DIVISION—cont.				
<i>(a) Paid by Government—cont.</i>				
686. Sub-Assistant Surgeon, Reserve.	Malia R. Udayagiri, G. Udayagiri and Balliguda. ....	....	....	Vacant.
687. Sub-Assistant Surgeon, Assistant Commissioner, Savara Agency.	....	....	....	Do.
<i>(b) Paid by local bodies.</i>				
688. Sub-Assistant Surgeon, Local Fund and Police Hospital (1).	Gunupur ..	House-rent.	6	
689. Sub-Assistant Surgeon, Local Fund Hospital (1).	Koraput ..	Do.	5	
690. Sub-Assistant Surgeon, Local Fund Dispensary.	Malkanagiri ..	....	Free quarters.	
691. Do. do.	Nowrangapur ..	....	Do.	
692. Do. do.	Ummarkote ..	....	Do.	
693. Do. do.	Pottanghi ..	....	Do.	
694. Sub-Assistant Surgeon, Local Fund Hospital (1).	Bissamcattack ..	....	Do.	
695. Sub-Assistant Surgeon, Local Fund Dispensary.	Addatigala ..	....	Do.	
696. Do. do.	Rampa Chodavaram ..	....	Do.	
697. Do. do.	Jangareddigudem ..	....	Do.	
698. Do. do.	Polavaram ..	....	Do.	
699. Do. do.	Kotpad ..	....	....	
700. Do. do.	Padwa ..	....	....	
701. Sub-Assistant Surgeon, Local Fund Hospital (1).	Rayaghada ..	....	....	
702. Sub-Assistant Surgeon, Local Fund Dispensary.	Gudari ..	....	....	
703. Local Fund Hospital ..	Jeypore ..	....	....	Held by Military Assistant Surgeon.
704. Midwife, Headquarter Hospital ..	Berhampur ..	Living hospital. near	1½	Personal to the present incumbent.
705. Midwife, Headquarter Hospital ..	Kannavaram (Agency)	Do.	2	Pending construction of quarters.

APPENDIX K.

List of sub-assistant surgeons who draw a jail allowance of Rs. 30.

1. Sub-Assistant Surgeon, District Jail ..	Berhampur.
2. Sub-Assistant Surgeon, Temporary ..	Calicut.
3. Do. do. ..	Cannanore.
4. Sub-Assistant Surgeons, Camp Jail (10) ..	Bellary.
5. Sub-Assistant Surgeons, Central Jail (3) ..	Do.
6. Sub-Assistant Surgeons, Central Jail and District Jail ..	Coimbatore.
7. Sub-Assistant Surgeon, Palamcottah ..	Palamcottah.
8. Sub-Assistant Surgeons, Central Jail (2) ..	Vellore.
9. Sub-Assistant Surgeon, District Jail ..	Madura.
10. Sub-Assistant Surgeons (3) ..	Trichinopoly.
11. Do. (3) ..	Salem.
12. Sub-Assistant Surgeon ..	Tanjore.
13. Sub-Assistant Surgeons, Central Jail (2) ..	Vizagapatam.
14. Sub-Assistant Surgeons (2) ..	Rajahmundry.
15. Sub-Assistant Surgeons, District Jail ..	Cuddalore.
16. Sub-Assistant Surgeons, Penitentiary (2) ..	Madras.
17. Sub-Assistant Surgeon, Civil Debtors' Jail (1) ..	Do.

VI.—REPORT OF THE AGRICULTURE AND VETERINARY
RETRENCHMENT COMMITTEE.

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REPORT OF THE VETERINARY AND AGRICULTURE RETRENCHMENT COMMITTEE.

The original terms of reference were that the Committee should enquire into the possibility of reducing the number of supervising officers in the two departments, viz., the Assistant Directors of Agriculture in the Agriculture Department and the Veterinary Inspectors in the Veterinary Department. Subsequently, however, on our recommendation the Government in G.O. No. 349, Mis., dated 17th March 1923, were pleased to extend our terms of reference so as to enable us to review the whole expenditure of the two departments.

2. The Committee also decided, with the consent of the Government, to co-opt Mr. R. W. Davies, I.C.S., in order to gain the benefit of his knowledge of the lines on which the general Retrenchment Committee were working.

PART I.

3. The first questions taken up by the Committee were those which affected both departments equally. The first of these is the possibility of provincializing the services. Under present conditions, when posts in the cadre of the Imperial Service fall vacant, they are no longer filled by recruitment from Europe, but particularly in the Agricultural Department they have been filled by members of the Provincial Service. It appears to the Committee that in future more and more of these Imperial posts will be dealt with in this way, until ultimately all may be filled by Provincial officers and, under these circumstances, it is unnecessarily extravagant to pay these officers the same salaries as have, in the past, been paid to Imperial officers recruited in Europe.

4. The Committee, therefore, recommend that fresh recruitment to the Imperial Service should cease; that vacancies in the Imperial Service should no longer be filled from the Provincial Service, but, if no Imperial officer is available for appointment to any such vacancy, the post should be held by a Provincial Service officer who should remain in the Provincial Service. In order to give immediate effect to these recommendations the Provincial Service officers at present acting in the Imperial Service posts should be reverted to the Provincial Service. There may be instances when there is no officer of the Provincial Service suitable for appointment to a vacant post and the Committee recognize that special measures would have to be taken in such cases to obtain a suitable officer whether on contract or otherwise and that their general recommendations cannot apply in such cases.

5. If effect is given to the above recommendation from 1st April 1923, there will be a saving in 1923-24 of Rs. 3,800 in the Agricultural Department and Rs. 680 in the Veterinary Department. Ultimately, when full effect has been given to the scheme proposed and should all Imperial posts on the cadre, viz., 25 in the Agricultural Department and 7 in the Veterinary Department, be held by Provincial officers, the savings would work up to a grand total of Rs. 2,27,000 per annum—Rs. 1,77,000 in the Agricultural Department and Rs. 50,000 in the Veterinary Department assuming that the present rate of pay for Provincial officers is maintained.

6. The next point considered by the Committee was the payment of stipends to students at the Veterinary and Agricultural Colleges. Under the present conditions, 40 (38 of Rs. 15 and 2 of Rs. 20 per mensem) stipends are offered at the Veterinary College and 20 of Rs. 25 per mensem at the Agricultural College each year. The Committee consider that this is unnecessary and extravagant in view of the fact that free education is given to the students of both institutions.

The Committee, therefore, recommend that stipends in the case of both colleges should in future be abolished, it being understood that the students who are at present receiving stipends should continue to draw them throughout their college career. The education provided at both colleges should be free to students drawn from the

Madras Presidency. If this proposal is adopted it would result in an ultimate saving of Rs. 38,130 per annum and an immediate saving of Rs. 8,800—Rs. 4,000 in the Agricultural Department and Rs. 4,800 in the Veterinary Department—in 1923-24.

7. The stipends are given in order to induce students to undergo training which will fit them for Government service in the departments and students drawing these stipends are bound to serve Government if so required for five years after leaving the Veterinary College and three years after leaving the Agricultural College. For the next two years, however, there will be no need for such students since both departments are now fairly well staffed and owing to the financial stringency their expansion is likely to be restricted. If in future years when it is possible to expand again it should be found impossible to get a sufficient number of trained students for Government service the question of giving stipends can be reconsidered.

PART II.

The Civil Veterinary Department.

8. Under the present constitution of the Civil Veterinary Department in this Presidency there is an entire divorce between the administrative side and the educational side, and the Committee are of opinion that this must lead to certain loss of efficiency. It seems essential that the standard of education at the college should conform to the veterinary needs and conditions of the Presidency, of which the head of the administrative side must be the best judge, and the Committee are strongly of opinion that there should be a single Director who would be responsible for the veterinary administration of the Presidency in both its aspects. This is merely introducing into the Veterinary Department the policy which is now in force in other departments, for example, Agriculture, Medical, Education, etc.

9. For the administration of the executive branch there are now Superintendents in the Indian Veterinary Service, Deputy Superintendents in the Madras Veterinary Service and Veterinary Inspectors. It appears to the Committee that these make too many grades in the administrative line. The main duty of the Inspectors is to conduct a detailed inspection of each Veterinary hospital or dispensary and to inspect the work of each touring Veterinary Assistant once a quarter. The inspection of hospitals and dispensaries is, however, elaborate and takes on each occasion a period of three or four days. In addition to this inspection by the Inspector, each institution is inspected by the Deputy Superintendent once in a year, but this inspection does not go into such minute details as that by the Inspector. It is admitted that the inspection by the Inspector serves a useful purpose in preventing waste of medicines and misuse and loss of instruments, but it is considered that the saving in this direction does not compensate for the increased expenditure necessitated by the appointment of the Inspectors, and that though some loss of efficiency may result inspection by a Deputy Superintendent only should be sufficient.

10. The Committee therefore recommend that the present grade of Inspectors should be entirely abolished. The men who are now holding the posts of Inspector should go into the Veterinary Assistant's grade but would of course continue to draw pay on their present scale, and as the Committee's proposal to do away with the grade of Inspectors would result in a very serious loss of prospects for the Veterinary Assistants, the Committee consider that a selection grade of Veterinary Assistants carrying pay similar to that of the present Inspectors should be instituted. The strength of this selection grade must depend to a great extent on the treatment accorded to other services and the Committee are not in a position to offer any definite recommendation on this point. The full saving in pay resulting from this recommendation is Rs. 14,500 a year and there is also a saving in travelling allowance and contingencies of about Rs. 11,500 a year, i.e., a total saving of Rs. 26,000.

11. Hitherto it has been the rule that a taluk office peon should be deputed for work with the touring Veterinary Assistant, but owing to the reduction in the number of taluk peons this is no longer possible and the Committee therefore consider that the posts of peons at present attached to the Inspectors should be retained and utilized for the touring Assistants.

12. As regards the higher administrative posts, there is at present a difference between the work assigned to the Superintendents of the Indian Veterinary Service and Deputy Superintendents of the Madras Veterinary Service. As under the Committee's proposals in Part I, the future policy will be to provincialize the present Imperial posts it will be anomalous to maintain the distinction between Superintendents' and Deputy Superintendents' work. The Committee therefore consider that the Presidency should be divided up into circles each of which should be in charge of a Deputy Director working directly under the Director. This change should be brought into effect at once and so long as officers both of the Indian Veterinary Service and the Madras Veterinary Service are available, the posts of Deputy Directors might be held by officers of either service.

13. On the educational side the Committee consider that the present staff of a Principal, two other Professors and one Assistant Professor working under the Director should be retained.

14. There are various immediate savings which can be effected in this department—

(1) It is recommended that Mr. K. V. Krishnamurti Ayyar's training at Muktesar be deferred, that Mr. Saunders be retained at Waltair as a Circle officer and be not deputed to Muktesar, that Mr. Hurley be posted to the Veterinary College as Professor of Surgery, and the Government of India be requested to post no more officers of the Indian Veterinary Service to this Presidency in 1923-24 and to cancel the postings already made. This would result in a saving of approximately Rs. 18,000.

(2) The post of Gymnastic Instructor at the Veterinary College should be left vacant and the present acting man dispensed with. Mr. Ramalinga Chettiyar, however, considers that this post should be definitely abolished.

(3) The conveyance allowance to the Principal, Madras Veterinary College, should be abolished.

(4) The provision of Rs. 50,000 for the purchase of anti-rinderpest and other sera should be reduced to Rs. 15,000 as sufficient stock is in hand.

(5) The Committee consider that work under the Glanders and Farcy Act is as much in the interests of a municipality as other branches of Public Health and that accordingly in the Madras City and in any other municipality which employs its own Veterinary officer, the administration of the Act including the payment of compensation for animals destroyed should be handed over to the municipal authorities and that the provision of Rs. 4,400 for this work in the Veterinary budget for 1923-24 be removed.

15. If the recommendations above mentioned are accepted the total saving on the budget of the Veterinary department for 1923-24 will amount to Rs. 85,530 as shown below:—

	Rs.
(1) Pay of the last 13 assistants to be dispensed with from 1st April 1923.	8,600
(2) Travelling allowance of Veterinary Inspectors	9,500
(3) Contingent expenditure of Veterinary Inspectors	2,000
(4) Stipends for the College year beginning July 1923	4,800
(5) Conveyance allowance of Principal, Veterinary College ..	1,200
(6) Pay of Gymnastic Instructor for 11 months	550
(7) Provision under Glanders and Farcy Act in Madras City ..	4,400
(8) Provision for anti-rinderpest and other sera	35,000
(9) Saving in pay of Mr. D'Silva by reversion to Madras Veterinary Service from 1st April.	580
(10) Saving by adoption of recommendation in paragraph 14 (1) ..	18,800
Total	<u>85,530</u>

PART III.

The Madras Agricultural Department.

16. The Committee approve of the method by which the Presidency has been divided into eight administrative circles, and are of opinion that the establishment employed in district work should be organized on the following basis.

17. The control of agricultural farms and demonstration work in a circle should vest in a circle officer who should be a member of the Madras Agricultural Service. The farms should be under the direct management of a farm manager who should be a senior and experienced member of the upper subordinate branch of the service and the demonstration staff should be under the direct control of a supervisor who should be styled assistant circle officer and who should be a member of the Madras Agricultural Service. The farm manager should have one or more assistants of the upper subordinate grade. The staff of demonstrators should be drawn from the upper subordinate grade and the class of assistant demonstrators of the lower subordinate grade should be abolished, experienced maistris being employed in their places as far as possible. The Committee are of opinion that demonstration work is of the utmost importance and that it should be in the hands of upper subordinates who may have to be strengthened in numbers, aided by special maistris and trained farm coolies. They feel that under this organization the work could be more efficiently carried out than at present with the staff of lower subordinates who are not fitted either by their general educational qualifications or scientific training for work of this importance and who are at the same time too expensive to carry out purely routine measures. The same thing applies to lower subordinates at present employed on the farms.

18. The abolition of the lower subordinate grade would remove the main justification for the present certificate course at the Agricultural College. It is true that no guarantee is given to students who take this course that they will be employed in the Agricultural Department, but the course has become unpopular for this very reason, and it would appear that there is no demand for this type of Agricultural education for its own sake. The Committee, therefore, are of the opinion that this course should be abolished at once so as to avoid selecting students for the new course which would normally begin in June. Steps should then be taken to consider whether it cannot be replaced by some forms of Vernacular Agricultural education in specified districts.

19. So far as the assistants in the lower subordinate grade attached to the Research staff at the College are concerned, in future these can be replaced by the present type of plant collector, and in order to get the right class of man, the Committee suggest that the maximum salary of plant collectors should be raised to Rs. 45. The ultimate annual cost of the sanctioned number of lower subordinates would have been Rs. 1,53,000 per annum and by the adoption of the Committee's recommendations at least Rs. 75,000 can be saved.

20. Recruitment into the upper subordinate service will be from students who take the new B.Sc.Ag. course at the Agricultural College.

21. The Committee realize that immediate effect cannot be given to these proposals, but they wish this to be taken as the definition of the future policy of the department.

22. Under the proposals set forth in Part I of this report, the Madras Agricultural Service may ultimately include all posts at present in the Indian Agricultural Service and will then include the following appointments:—

The Principal, Professors and Assistant Professors at the Agricultural College.

Research Officers and Assistant Research Officers.

The Superintendent, Central Farm.

The Curator, Government Botanical Gardens, Ootacamund.

Circle Officers (at present styled Deputy Directors).

Assistant Circle Officers (at present styled Assistant Directors).

23. Recruitment to the Madras Agricultural Service should be both direct and from Upper Subordinate Service, but the maximum number of posts filled direct should not exceed 25 per cent of the total number.

24. With reference to the Agricultural Engineering section at the Agricultural College, Coimbatore, the Committee are of the opinion that the two posts are necessary—

(1) Agricultural Engineer.

(2) Lecturer in Agricultural Engineering.

They consider, however, that the pay of the former is pitched too high and recommend that the services of the present Agricultural Engineer be dispensed with and his place taken by an officer with qualifications and pay similar to those of the Madras Engineering Service. They consider that if this recommendation is accepted, the post of one of the two supervisors may be abolished. The ultimate saving would be a sum of Rs. 3,000 per annum.

25. The Committee are of the opinion that the two present posts of Inspectors of Agricultural offices are necessary, but that, as the main duty of these officers is auditing, their designations should be changed to 'Auditors of Agricultural officers.' Their service should be retained, with headquarters at Madras and Coimbatore respectively.

26. With reference to the sum budgeted for under the head of 'Improvement of cotton cultivation,' the Committee note that a considerable proportion of this is recovered, but they desire that an endeavour should be made to make this work wholly self-supporting.

27. The Committee consider that on the whole the Agricultural Department is being economically carried on, but they suggest that the following immediate savings on the budget allotment can be made—

(1) The special pay of Rs. 1,200 to a Professor at the Agricultural College for duty as Librarian should be abolished.

(2) The special pay of the Veterinary Assistant at the Agricultural College should be reduced from Rs. 50 to Rs. 20 per mensem.

(3) The post of Bacteriologist should be abolished.

(4) The Cotton Farm at Anamalai should be abolished and the land sold.

(5) The post of Farm Manager at the Botanical Gardens, Ootacamund, and of the Overseer on Rs. 35 under 'Other public Gardens and Parks' should be abolished.

(6) The provision of Rs. 5,000 under 'Other contingencies' for the Botanical Gardens should be reduced to Rs. 3,000 by restricting the purchase of new seeds and plants.

(7) The provision of Rs. 990 for the Old College Park should be removed from the Agricultural Department's budget.

(8) The sums provided for the Zoological collections in the People's Park, Rs. 2,000 and for the contribution to the Agri-Horticultural Garden and Societies, Rs. 6,000 should be removed from the Agricultural Department's budget.

28. The Committee call attention to the fact that the provision made for the salary of the Deputy Director of Agriculture, Planting Districts, the Government Entomologist, and the eight Deputy Directors of Agriculture, is in excess of the pay which will be drawn by the officers actually holding these posts during the year 1923-24 by the sum of Rs. 28,000 and suggest that this sum may be removed from the budget.

VII.—REPORT OF THE PUBLIC WORKS DEPARTMENT,
BUILDINGS AND ROADS, INQUIRY COMMITTEE.

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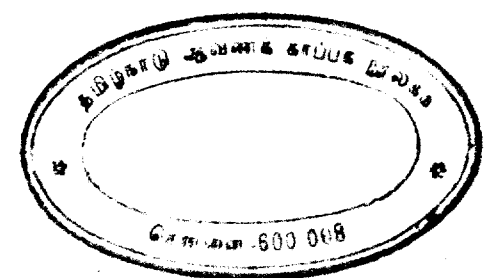


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REPORT OF THE PUBLIC WORKS DEPARTMENT (BUILDINGS AND ROADS) INQUIRY COMMITTEE.

INTRODUCTORY.

The Committee were appointed in G.O. No. 375 W., dated the 5th April 1923, with the object of advising as to whether it is possible to secure economy in the cost of construction of works carried out by the Public Works Department. The Committee were appointed at the instance of the Hon'ble the Minister in charge of the 'Buildings and Roads' Branch of the department. It must be understood therefore that their remarks relate only to this branch and not to the Irrigation Branch of the department. They have found that the chief factors tending to increase the cost of works carried out by the department are delay in execution and the lack of adequate time for detailed inspection and supervision on the part of divisional and, in many cases, subdivisonal officers. They have therefore examined every factor which in their opinion tends either to delay execution or to interfere with inspection. They have considered to what extent economy in construction might be secured by the adoption of other systems of execution than those prevalent in the department, by the simplification of design and by the employment of cheaper materials. They have also, as requested in their order of appointment, framed replies to the questionnaire which was attached to G.O. No. 912 W., dated the 22nd September 1922. Before proceeding to set forth their detailed recommendations, they desire to place on record their opinion that the complaints and criticisms which have been levelled against the department are due rather to the handicaps and drawbacks of the existing system than to general default on the part of divisional controlling officers.

2. The Committee have divided their report into the following sections :—

- I. Systems of execution of works.
- II. Factors which militate against the speedy and economic execution of work by the Public Works Department.
- III. Subordinate officers of the Public Works Department.
- IV. Delegation of powers.
- V. Audit.
- VI. Architecture and design.
- VII. The use of cheaper materials.
- VIII. Revision of estimates.
- IX. Public Works Workshops.
- X. Amalgamation of the Public Works, Buildings and Roads, and the Local Fund Engineering establishments.
- XI. The questionnaire.
- XII. Debit of construction and maintenance charges of works to administrative departments.

I.—SYSTEMS OF EXECUTION OF WORKS.

3. The systems employed in the Public Works Department for the carrying out of construction and repair works are the departmental, the piece-work and the schedule contract. In a recent G.O. No. 120 W., dated 2nd February 1922, instructions were issued to officers of the department that a trial should be given to the lump sum contract. The Committee have discussed the existing and proposed systems with a view to ascertain whether any definite recommendation can be made as to the superiority of any one system over the others, so far as rapidity and efficiency in carrying out work are concerned. They are agreed that the factors operating in individual cases are too varied and too numerous to permit of any definite expression of opinion and that all the systems enumerated are capable of being carried out satisfactorily provided that the requisites for satisfactory working are present. On one point, however, the Committee are, with the exception of the two Public Works members, in agreement and that is that the piece-work system

is unsatisfactory except for 'petty works.' With these preliminary remarks the Committee propose to set forth their views as to each system of execution that has been brought to their notice.

1. *The departmental system.*

4. All members of the Committee are agreed that the departmental system should provide the best results with regard to the quality of materials and reliability of workmanship. Mr. Marsh, however, prefers to employ a contractor rather than departmental agency, in the absence of any special circumstances which may render departmental work necessary or advisable. Mr. Wood agrees with Mr. Marsh. Mr. Greg states that from his experience works carried out on the departmental system are more expensive. Mr. Balaji Rao Nayudu and Mr. Ramalinga Chettiyar, while acknowledging the merits of the departmental system, believe that it is difficult to secure adequate supervision and prefer, therefore, to employ a contractor. Captain Irwin, the Chairman, and Mr. Ranganayakulu Nayudu are of opinion that the departmental system of execution is not only the best but also the most economical. This view has the support of Mr. Richards, a building contractor, who gave evidence before the Committee.

2. *The piece-work system.*

5. This system, known as the K-2 system, is the one most commonly in use in the Public Works Department. Under this system the piece-worker signs an agreement to execute work at so much a unit. There is no contract as to the quantity of work to be carried out by the piece-worker nor is there any time-limit fixed. The disadvantages of this system are the absence of a time-limit, the lack of security of contract, the want of incentive to speedy completion of the work and the fact that the piece-worker is practically in the hands of the subordinates of the department.

6. The Committee have pointed out elsewhere in their report, when dealing with the question of revised estimates, that in their opinion delay in the execution of work, and the consequent necessity in many cases for revision of estimates, are to a large extent due to the employment of this system. Mr. Greg and Mr. Ranganayakulu Nayudu, while admitting that the system can most certainly be charged with the above disadvantages, consider it to be the most suitable in the conditions under which the Public Works Department has to execute work. The rest of the Committee would confine the system to petty works, particularly where a number of small works in charge of one officer is scattered over a large area, and to petty repairs. Captain Irwin would, however, prefer to execute minor works and repairs through the medium of the job-worker.

3. *The schedule contract system.*

7. The Public Works Department has made provision for the employment of this system and the form of the contract is known as K-1. The contract contains a schedule of quantities and rates, the rates being those agreed to by the contractor, and also contains a time condition with a penalty clause. Payment under this form is made on the basis of quantities ascertained by detailed measurement. The system is one that is preferred by all the non-official members of the Committee and by Mr. Barker of Messrs. Jackson and Barker. Of the four official members, two, Captain Irwin and the Chairman, agree that the schedule contract system is preferable to the K-2 system if the work is to be given out on contract and not executed on the departmental system. Mr. Greg and Mr. Ranganayakulu Nayudu have pointed out that it is not possible, so far as their experience goes, to secure contractors under this system and the majority of the officers of the department appears to agree with them. This difficulty appears, both from the evidence tendered before the Committee and from the experience of the majority of the members of the Committee, to be peculiar to the Public Works Department and to be due to the many defects in the methods of work of that department—defects which the Committee have set forth elsewhere in this report and for which they have endeavoured to suggest remedies. The Committee are further of the opinion that the conditions as set forth

in the present K-1 contract form give Government an undue advantage over the contractor and that the contract conditions should be revised on a fairer basis. It has been mentioned elsewhere in the report that, if Government delay in making expected payments, the contractor should receive suitable recompense, and it is on this basis that revision of the existing K-1 form of contract may be made. It is also suggested that if a time penalty is to be exacted, the counter-attraction of a bonus for completion within the time specified should form part of the contract. On the other hand, the Committee wish to record their view that there should be security lodged by the contractor as a guarantee by him of the due fulfilment of his undertakings, for which no proper provision is now made. The matter of Security Deposits is referred to later in the report.

4. *The Lump Sum Contract.*

8. The lump sum contract was suggested in the first instance by the Public Works Reorganization Committee and was recommended by the Government of India. The Madras Government directed that the system should be tried in the case of small building works and a form of lump sum contract was standardized over a year ago. So far, however, the system has not yet been given a trial, on the score that no contractor will take up this form of contract. The contract involves accuracy in the quantities furnished to the contractor, to ensure which accuracy more detailed plans and specifications, than are at present furnished to contractors, are requisite. The merit of the system is that it avoids the necessity of detailed measurement, apart from the measurement of deviations and additions, and although the Committee have recommended elsewhere that the necessity for payment on detailed measurement should in the ordinary form of contract be restricted to the final measurement, the lump sum contract secures the additional advantage that, where no deviations have occurred, the necessity for measurement is altogether eliminated. In the various notes on systems of execution which have been embodied in annexure A will be found the views of Mr. Barker, Mr. Hawkins and Mr. Nicholls with regard to lump sum contracts. Mr. Barker, in his oral evidence before the Committee, expressed the opinion that there are no contractors in Madras who could take out their own quantities. There are however contractors who, if accurate quantities are furnished to them, would be able to tender on the lump sum system. Mr. Barker stated that the bills of quantities prepared by the Public Works Department are not prepared in sufficient detail, nor with the precise accuracy, nor with the full descriptions of the various classes of work required, to enable the value of the work done to be arrived at merely by measuring up the variations, as is the usual practice in lump sum contracts. Mr. Barker's conclusions were that the lump sum contract, as usually understood, was not suitable save in the case of small buildings where there is not much chance of deviation, but that there is no objection to lump sum contracts provided it is understood that measurements will be taken of the actual work done and that all variations will be paid for.

9. Time is of the essence of the contract and a penalty clause is essential. It is difficult, however, to enforce such a clause unless delays which are due to Government are excluded or compensation is paid to the contractor therefor. Under the lump sum system intermediate payments would be based not on detailed measurements but on a comparison of the stage at which the work had reached with the bill of quantities. The Committee are of the opinion that the lump sum contract system might be adopted in the case of all works and that endeavours should be made to introduce the system. At first, however, it should be tried only in the case of smaller and type-design works and, if it proves successful, it may be extended.

10. A novel scheme for providing accommodation, a note with regard to which will be found in annexure B, has been put forward by one of the members of the Committee, Mr. Ranganayakulu Nayudu. The proposal in brief is that Government should advance by way of loan the cost of a building required for a Government office or residence, that the individual to whom the money is advanced should construct the building in accordance with the desired plan, that the building should belong to the individual concerned and that Government should pay rent therefor. The loan would be recovered in instalments with interest which would be deducted from the

rent. The Committee were informed that the scheme has been tried successfully in the case of the Rajahmundry Post Office, but as no member of the Committee, other than the maker of the proposal, has had experience thereof, they are unable to say whether the scheme would prove successful in practice. With the exception of Mr. Greg and Mr. Ramalinga Chettiyar, the Committee are prepared to recommend that the scheme be given a trial, although they do not accept all the details of the scheme as put forward by the proposer. The chief merits are—

(1) Buildings constructed on this system would be constructed from loan money and not from current revenues.

(2) Detailed supervision and audit would be dispensed with.

11. The Committee regret that it should, in the opinion of the officers of the department, be considered impracticable to carry out work either on a lump sum contract or on a schedule contract. They consider that the root cause lies in the drawbacks inherent in the working of the department itself and not in the methods and systems of execution which have been referred to in the preceding paragraphs.

12. The question of systems of execution has been and is the subject of considerable controversy. The Committee have therefore thought it advisable to publish extracts from some of the opinions furnished to them by members of the department or taken from the reports of Committees that have dealt with the subject. The extracts will be found in annexure A.

II.—FACTORS WHICH MILITATE AGAINST THE SPEEDY AND ECONOMIC EXECUTION OF WORK BY THE PUBLIC WORKS DEPARTMENT.

13. *Absence of a programme.*—All officers of the department have insisted—and on this point the Committee are in agreement with them—that the absence of a programme of works is one of the most material handicaps from which the officers of the department suffer. It is not improbable that it is the existence of this state of affairs that prevents arrangements being made to secure contractors and to collect materials in sufficient time to enable works to be commenced and completed without delay. So long therefore as this handicap continues,—a handicap for which the executive officers of the department are not themselves responsible,—it is unreasonable to expect that pronounced improvements can be made. The lack of certainty as to whether funds will continue to be provided in adequate volume to enable a work that has been commenced to be carried out without intervals of idleness, or to enable prompt payments on running account to be made, must operate as a serious deterrent to the officers and contractors of the department. The Committee therefore recommend that in the case of new works, the time both of commencement and of completion should be fixed and that the amount that is to be allotted for each financial year should be specified before the work is commenced. If this procedure is adopted in the case of new works, the Engineers and contractors of the department will be aware that the suspension of a work in progress will not, under all ordinary circumstances, take place and will be in a position to continue the intensive execution of work that is in progress in the month of March throughout the succeeding months of April and May without uncertainty as to whether funds will be provided in the budget.

14. It should be recognized that the chief foe to steady continuity of construction is the bisection of the building season by the financial year. The main works season runs from the 1st January to the 31st of May, although in districts not affected by the south-west monsoon the working season, while commencing at the same time, continues till a later period. It is not only the onset of the rains that in itself renders work impossible: an equally important factor is the deflection of labour to transplantation, harvest and other cultural operations. As regards incomplete works, no such difficulty need arise if a programme of expenditure is fixed before the work is commenced and the Engineer is allowed to arrange for execution on the basis of that programme. It should be recognized that contractors will not take up a complete contract save on a definite financial understanding of this nature and that the main reason for the employment of the piece-work system by the Public Works Department is the lack of financial certainty involved in work undertaken for the department.

15. The Committee have been informed that expenditure on works has, in accordance with departmental orders, to be made at regular intervals 'continuously throughout the year'. The idea underlying these orders hardly represents a correct appreciation of multifarious conditions, which render the carrying out of such instructions impossible of fulfilment.

16. Similarly the treatment of heavy expenditure in March as a matter for reprobation appears to indicate a lack of appreciation of an obvious fact on which the Public Works Reorganization and other Committees have laid emphatic stress. It should be recognized that 'rush of expenditure' in March cannot be avoided if works are not commenced till the beginning of the year, and that heavy payments in March that are due to this cause are inevitable. Where heavy expenditure in March is due to dilatoriness or negligence in measuring and check-measuring or to delay in preparing or passing bills or making payments, to that extent expenditure at the close of the financial year is avoidable. Departmental orders have been issued in the past that expenditure incurred in February should be paid for in March and that expenditure incurred in March should ordinarily be paid for in April. Such a rule can only suitably be applied if funds that have been allotted for one financial year are carried forward without lapse into the succeeding year.

17. *Land Acquisition.*—The Committee consider that, in cases in which the acquisition of land under the Land Acquisition Act is necessary prior to the construction of a work, no sum other than the amount considered sufficient to provide for the acquisition of the land should be allotted in the budget until the land has been acquired. This recommendation would not apply if emergency powers of entry and acquisition were exercised by Government under section 17 of Act I of 1894.

18. *Delays in measurements and in payments.*—The Committee are of the opinion that considerable delay in measurement and check-measurement and in the preparation and payment of bills does take place. They consider that the system under which measurements and payments are carried out is over-elaborate and that contractors are unnecessarily handicapped by having to wait for considerable periods for part payment on account of work done. They consider that in the majority of cases one detailed measurement is sufficient, viz., final measurement of completed works, sub-works or sub-heads. They therefore propose that the measurement or check-measurement conducted by the officer responsible for making the final measurements should only be insisted upon on completion of the work. Intermediate payments should be permitted on quantities recorded in the measurement book by the officer immediately in charge of the work, accompanied by a descriptive note as to the stage which the work has reached. Payment on account may, therefore, be based not on recorded detailed measurements but on the recorded quantities and certificate of the officer in charge of the work. Sufficient check as to the accuracy of the quantities so recorded can be carried out by inspecting officers during the course of their inspection. Mr. Ramalingam Chettiyar, while agreeing that it is unnecessary to carry out check-measurement during the progress of the work, desires to have his opinion placed on record that the entries in the measurement book on which payments on account are passed should be accompanied by detailed measurements.

19. The Committee consider it preferable, however, that contractors should be compelled to furnish their own bills for payment, such bills being supported by detailed measurements entered on a simplified form supplied for their use by Government. The officer in immediate charge of the work would on receipt of such a bill certify on inspection that payment of the amount specified in his certificate may be made. Should such subordinate officer take exception to any item of the contractor's bill, the bill should not be returned but a note of the items to which exception is taken should be made on the bill and in the measurement book and the bill certified for the reduced amount.

20. Payment of a contractor's bill on account should be made within fourteen days of its submission. Payment of the bill on account prepared by the officer in charge of the work should be made within fourteen days of the date of measurement. Interest should be allowed to a contractor for delay made in payment beyond the prescribed period of fourteen days.

21. The Committee are of the opinion that in all cases in which work is given out on contract, a security deposit should be taken from the contractor. The deposit will cover not only delays beyond the time specified but also other defaults. It was reported to the Committee that private firms, railways and local boards are accustomed to demand such security.

22. *Petty Supervision and Contingencies.*—Public Works estimates contain a provision of five per cent on account of petty supervision and five per cent on account of contingencies. The Committee are of the opinion that if the work of the department were carried out without the customary delay that appears to be inherent in the present system and if all or many of the factors that militate at present against rapidity of execution could be removed, the charge for petty supervision and contingencies might be reduced, from the present figure of ten, to five per cent. The effecting of such a reduction would secure an appreciable saving in the annual expenditure of the Presidency.

23. *Part contribution works.*—The Committee have been informed that in the case of part contribution works which have been carried out by private bodies, Government have in some cases insisted that detailed supervision and measurement should be carried out by officers of the Public Works Department. The Committee consider it unnecessary that the contribution of a half-grant to works carried out by private bodies with their own contractors should involve the same detailed supervision by, and responsibility on the part of, Public Works officers as work carried out by the department for Government. They consider that a certificate of completion based on inspection of the completed work should suffice for the purpose of payment of the grant. The officer of the department who inspects the building and grants the certificate should have no responsibility for structural soundness. If the Committee's proposal is adopted a great deal of departmental time and labour, which would more profitably be employed on Government work, will be economised to the benefit of the latter.

24. *Intervention of Administrative departments.*—The Committee are of the opinion that 'administrative' alterations and variations present a real obstacle to rapid progress and are not seldom responsible for serious delays in construction. They have perused G.O. No. 1099 W., dated 3rd August 1921, and are of the opinion that the case is not adequately met by the mere calling of attention to the existence of an admitted evil. Officers of the Public Works Department should have much greater discretion in the matter and should be authorized to refuse to consider suggestions for alterations unless they are themselves satisfied that they are necessary or will not prove a source of delay. These remarks apply particularly to alterations demanded by an administrative department after construction has been commenced.

III.—SUBORDINATE OFFICERS OF THE PUBLIC WORKS DEPARTMENT.

25. *Recruitment and training.*—The Committee are not satisfied that the Lower Subordinate establishments hitherto employed by the Public Works Department as Section Officers, on whom fell the brunt of the responsibility for supervision and execution, were sufficiently reliable and efficient to carry out their duties and responsibilities satisfactorily. They had therefore intended to recommend that the type of subordinates hitherto known as sub-overseer should no longer be employed on buildings and other construction works. They understand, however, that orders to this effect have already been issued and that the lowest grade subordinate now employed as officer in charge of works is the Supervisor, whose salary ranges from Rs. 80—250. They were also informed that the post of Assistant Engineer would in future be recruited entirely from the 'Supervisor' grade. With this proposal they are in agreement. With regard to the qualifications necessary for the post, they consider that all recruits to the grade of Supervisor should possess the diploma of engineering. It follows therefore that, so far as recruitment for Government service is concerned, the 'Upper subordinate' course in the College of Engineering may be abolished, and instruction in the College be confined to two definite courses:—

- (1) The Engineering course.
- (2) The Subordinate course.

The latter course would provide draftsmen and would also provide the Lower subordinate class which is still being recruited for the Irrigation branch of the Public Works Department.

Mr. Marsh, however, recommends partial recruitment from the subordinate class, for the Buildings and Roads branch, subject to a low maximum salary promotion bar.

26. *Conditions of service.*—The Committee are of the opinion that the present system of pensionable service should be replaced by a contributory provident fund to which Government should contribute an amount equivalent to the sum paid in by the depositor himself. They consider that this system would not render service less attractive and that it would make it easier for Government to dispense with the services of officers, whose work or conduct proved unsatisfactory.

IV.—DELEGATION OF POWERS.

27. Another avenue by which the question of minimising delay and increasing inspection might be approached, viz., by decentralization and delegation of authority, has already been explored by Mr. Hawkins' Committee, a copy of whose report will be found in annexure C. In view of the investigation that has already taken place, this Committee have confined themselves, so far as the question of delegation is concerned, to a consideration of that report. They agree in the main with the recommendations of that Committee and set forth below the points with regard to which they are in disagreement and the comments that they have found it necessary to make with regard to the report itself, the schedule of powers and Mr. Swaminatha Ayyar's note on the elimination of returns:—

Paragraph 1 of the report.—The principles laid down in this paragraph that important structural design should be dealt with in a central drawing office, that the technical importance and not the total cost of a work should be the determining factor in allotting responsibility for design, and that the local officer should, in the case of important works designed in central designing offices, be responsible only for the local features and for the estimates, ought, in the opinion of the Committee, to be adopted. One of the members of the Committee suggested that all designing other than that carried out in the Chief Engineer's office should be delegated to the Executive Engineer and the post of Superintending Engineer abolished. The majority of this Committee is of the opinion that the question of the abolition of Superintending Engineers depends on the consideration not only of the work carried out in their drawing offices but on a scrutiny of the whole of their administrative functions and may therefore be more suitably dealt with by the Retrenchment Committee.

28. *Paragraph 3 of the report.*—The Committee are unable to approve of the suggestion that additions or alterations due to administrative requirements should form the subject of separate and not of revised estimates. They agree, however, that in cases of alterations to works in hand, when new works are requisitioned which are separate from, although connected with, the original work, supplementary estimates are preferable to revision of the original estimates.

29. With regard to excesses due to other causes they have modified the proposed delegation of powers, as they consider that 5 per cent subject to a maximum of Rs. 500 in the case of a Superintending Engineer, and 5 per cent subject to a maximum of Rs. 250 in the case of an Executive Engineer, are adequate.

30. The views of Mr. Hawkins' Committee with regard to 'tight' estimating are not accepted. The Committee are of the opinion that Public Works Department estimates as at present prepared are not 'tight' estimates and that the practice, in accordance with which an allowance of 10 per cent on labour and material as contractor's profits is included in Public Works Department estimates, should be discontinued. Such a practice is not justified in estimates based on the existing schedule of rates. Moreover, the natural tendency of the inclusion of such an allowance is to send up the rates. The proposal of Mr. Hawkins' Committee is to the effect that there should be two sanctions, the administrative sanction which should include the real working estimate plus an allowance for contractor's profits and other contingencies, and the sanctioned estimate which should represent the accepted minimum working cost of work. This proposal is, in the view of the Committee, open to serious objection, and the only principle to which the Committee can give their adherence is that

Public Works Department rates should be based on the estimated net cost to the contractor plus a sufficient margin for the contractor's incidental expenditure and profits.

31. *Paragraph 7 of the report—Public Works Stores.*—In the opinion of the Committee the Public Works Stores, as at present organized, cannot satisfactorily perform the functions of a Central Purchasing Agency. They agree with Mr. Hawkins' Committee that it is of real importance that such an agency should be developed. Prompt and economic purchase must have a direct bearing on the cost of works erected by the Department and it is the view of the Committee that the present arrangement under which the Superintendent of the Workshops is responsible, without a single qualified assistant, both for the Stores and the Workshops, is bound to lead to unsatisfactory results. The Committee have been informed that stocks more than sufficient for the requirements of the Department are carried, that unsuitable and unrequired stores are unnecessarily retained in stock, that the book value of stores is the purchase price, irrespective of the market value, and that the value of issue is the receipt value without additional charges for handling, storage, issue or cartage. As a purchasing agency the Stores suffer from the absence of suitable indexes as to articles stocked by manufacturers and suppliers and as to suppliers themselves. If this statement of the case is correct, the Committee consider that, inasmuch as a properly organized and equipped Stores and Agency is essential to the Department, there is ground for a separate enquiry as to the necessity for overhauling and re-organizing the Public Works Department Stores.

32. *Paragraph 8 of the report.*—Mr. Hawkins' Committee have recommended that 'some' power should be delegated to Subdivisional Officers with regard to the disposal of worn-out or unserviceable materials and stores. They have not specified what that power should be and this Committee do not think it necessary to make such delegation of power. On the general question of delegation of powers to Subdivisional Officers, the Committee have been informed that considerable delegations have already taken place. They are of the opinion that no further powers should be delegated to Subdivisional Officers.

33. *Paragraph 9 of the report.*—The Committee agree that G.O. No. 440 W. of 1918, is bound to be ineffective and inoperative. It should therefore be withdrawn. The introduction of form No. 32 is recommended.

34. *Paragraph 18, Minor Works.*—The Committee are of the opinion that Minor works carried out by the Public Works Department on behalf of other departments should be budgeted for in the ordinary manner and not by means of a lump sum budget grant. No such work should be provided for in the budget until estimates for the work have been administratively and technically sanctioned. Small lump sum grants should however be provided for each division for expenditure on unforeseen works, the grants being allotted at the discretion of the Executive Engineer in charge of the division.

35. *Schedule attached to the report.*—The delegation of powers proposed by Mr. Hawkins' Committee and exhibited in their schedule is accepted with the following modifications:—

I. (b) Column 4—Read "as at present."
 " 6—Read "up to 5 per cent or Rs. 250."

III. 1. " 6—Read "Additional powers up to Rs. 50,000 for K-2 agreements."

IV. Add (h) at the end:—

Column 1.—Purchase of tools and plant.

" 2.—Nil.
 " 3.—Rs. 10,000.
 " 4.—Rs. 15,000 per annum.
 " 5.—Rs. 500.
 " 6.—Rs. 2,000 per annum.

The attention of the Committee was directed to VII (1) Reappropriation of funds for major and minor works. The Committee understand that the powers of reappropriation within a circle or division may not be exercised either by a Superintending Engineer or by an Executive Engineer. They consider that the refusal to allow reappropriation cannot fail to be a fruitful source of delay and that in many cases it must form a definite bar to progress. The Committee, therefore, feel it necessary to call attention to the necessity for allowing reappropriation.

36. With the other recommendations of Mr. Hawkins' Committee, this Committee find themselves in agreement.

37. *Discontinuance of returns.*—In a memorandum appended to Mr. Hawkins' Committee's report, Mr. Swaminatha Ayyar has suggested that a number of returns, which are at present prepared in Divisional offices and for which many of the materials are collected in Subdivisional offices, should be dispensed with. The Committee are in agreement with Mr. Swaminatha Ayyar as to the discontinuance of the returns, with the exception of the return marked as No. 8 'Half-yearly list of surplus stores' which should, in the view of the Committee, continue to be submitted. If these returns are dispensed with, Divisional and Subdivisional Officers will have greater freedom, increased efficiency will result, and it may be possible to reduce establishments. They recommend that the subject of 'returns' be further pursued.

V.—AUDIT.

38. It has been represented to the Committee that one of the main causes operating to delay execution is to be found in the detailed audit of Public Works Accounts. It has also been represented that so much of the time of the executive officers of the department is occupied in answering audit objections that the carrying out of works is seriously delayed and that inspection work has to a large extent to be neglected in consequence. That these representations are correct seems hardly open to dispute in view of the recorded opinions of the Public Works Reorganization and other Committees that have commented on the point. Extracts therefrom have been taken and are attached to the report as annexure D. The Committee had the advantage of discussing the question with Mr. C. Subrahmanya Ayyar, Deputy Accountant-General, Public Works. Their conclusion is that the question of simplification of audit is of paramount importance and that steps should be taken to appoint a small *ad hoc* Committee to devise a simplified method of audit. The Committee were informed by Mr. Subrahmanya Ayyar that a great many of the audit objections that are taken are based on the administrative orders of the Local Government and that, if simplification is to be secured, the administrative orders embodied in the Works Audit Manual, the Public Works Account Code and the Public Works Department Code will have to be modified or cancelled. The Accounts Department itself is merely carrying out the instructions of the Local Government and has no objection to dispense with such of the administrative orders and such portions of the audit as the Local Government may consider it unnecessary to impose. The Committee, therefore, recommend that an exhaustive examination be undertaken of the Public Works Department Codes and the Audit Manual. They desire, however, to express their opinion on one or two major points:—

(1) In each Divisional office there is a divisional accountant on a salary of Rs. 100 to Rs. 270 who belongs to the Accounts Department and is responsible to the Accountant-General. This officer is responsible for the audit of all disbursements which, so far as divisional works are concerned, are made by Subdivisional Officers. The detailed audit conducted by this officer provides sufficient security without a second detailed check in the Accountant-General's office. The Accountant-General's check examination can be effected at the annual inspection of the Divisional office.

(2) For each completed work, sub-work or sub-head of a work, for which final measurements have been made, there should be one detailed final audit before final payment. Intermediate audit of intermediate payments is unnecessary: all that is required is to see that the estimate is not exceeded.

(3) The former practice under which the check in the Accountant-General's office of expenditure on maintenance was made without reference to detailed estimates should be reverted to and a similar practice should be adopted in the case of expenditure on new works.

(4) Mr. Hawkins has suggested that the divisional accountant should be made personally and solely responsible for the correct compilation of divisional accounts and that the Executive Engineer should confine his attention to the working accounts. A minority of the Committee, of which the Chairman is one, is in favour of Mr. Hawkins' proposal. The majority considers that the proposal should only be adopted if the duties of the divisional accountant are confined solely to the accounts work of the Divisional office to which he is attached.

(5) It is the system of audit that requires simplification and not the actual forms of the accounts, which are stated to be suitable.

(6) It was brought to the notice of the Committee that although the Sub-divisional Officer is the disbursing officer for divisional works, yet all bills for intermediate payments of the value of more than Rs. 1,000 are forwarded to the Executive Engineer for examination and countersignature. They consider that such countersignature on the part of the Executive Engineer should be minimized as far as possible. They, therefore, recommend that Subdivisional Officers, who are as a rule of the rank of Assistant Engineer, should be empowered to make payments on account up to a limit of Rs. 5,000 for each intermediate payment without the countersignature of the Executive Engineer.

VI.—ARCHITECTURE AND DESIGN.

39. *Consulting Architect to Government.*—The Committee are of the opinion that there should be an architectural branch in the Public Works Department Secretariat at the head of which should be the Consulting Architect to Government. The Consulting Architect to Government should not occupy the position of Technical Assistant to the Chief Engineer and, although he should be subordinate to the Chief Engineer, his branch should be separate and self-contained. He should correspond direct with the heads of the administrative departments with regard to designing work that he has undertaken on behalf of their departments. He should also correspond direct with the Engineers who are responsible for the construction of work designed by him and the Engineers should refer directly to him all points on which they require his advice or on which they have suggestions to offer. The staff should consist for the present of the Consulting Architect and of one Assistant Architect, with the necessary drawing and estimating staff. Mr. Nicholls, who was interrogated on the subject, suggested that the drawing staff might be retained in his branch and the taking out of quantities and estimating carried out in the Chief Engineer's technical branch. The Committee consider it desirable, however, that quantities should be calculated in the office of the Consulting Architect who is responsible for the plans and specifications.

40. The Committee made enquiries with regard to the Special Consulting Architect to Government and were informed that, among other miscellaneous duties, he occupied the position of Consulting Architect to the Director of Public Instruction for the design of educational buildings. The Committee are of the opinion that all designing work, whether of educational or of other buildings, should be carried on in the architectural branch. There is, in their opinion, no necessity for a Special Consulting Architect working independently of the Consulting Architect to Government. They, therefore, recommend that the post of Special Consulting Architect may be abolished.

41. *Simplification of design.*—The Committee are of the opinion that the design of official architecture is already based on the principle of the provision of a cheap class of buildings. With regard to residential quarters, however, more particularly quarters for subordinates, they are not satisfied that the designs are the most suitable to Indian requirements or are sufficiently economical. In the case of other buildings, they do not consider that there is much scope for simplification of design. Attention is invited to the courtyard type of building, exemplified in C.A. 30/23, which provides an economical plan of construction.

42. The Committee were informed that the standard type-designs of buildings, of which there are large numbers in existence, are being continually revised. They are of the opinion that there is a sufficient number of designs already in existence to

render further revision unnecessary. Moreover, while admitting the usefulness of type-designs, they consider that the rigid standardization of types is unsound in principle, and, except in the case of type-designs for residential buildings designed to suit local conditions, in application impracticable. It should be open to Public Works Department officers and to heads of administrative offices to select a design which is suitable to their requirements from the existing type-designs, and to carry out such modifications as may be necessary to suit the requirements of new buildings that are projected. Should no suitable design be available, the Consulting Architect should be requested to design a building suitable to the requirements of the case. Or, should the alterations required in an existing type-design necessitate important departures from that type, the Consulting Architect might be requested to make the necessary additions and alterations. The further standardization of types, involving, as it does, not only continual noting, references and correspondence but also considerable expenditure on reproduction and distribution, should, in the opinion of the Committee, be definitely abandoned.

VII.—THE USE OF CHEAPER MATERIALS.

43. The Committee have considered the question of the use of cheaper materials in Government buildings and desire to put forward the following suggestions:—

(1) Attention is invited to Public Works Department Memorandum No. 1854-C., dated 19th February 1923. This memorandum includes a note on the subject of Madras timbers and their uses which has been prepared by Mr. C. T. Mullings. By adoption of the factors of safety and the deflections recommended by Mr. Mullings, it is calculated that a saving of approximately 20 per cent can be made on the cost of timber used in Government buildings.

(2) The actual charges for timber—always a heavy item—would be considerably reduced if cut timber were purchased direct from the Forest Department. In order to enable the Forest Department to supply cut timber of properly seasoned wood, the approximate requirements of the Presidency over a period of years should be estimated and intimated two years ahead. If this were done, the Forest Department could arrange to have a supply of seasoned timber always in stock for distribution to Public Works Department officers.

A further advantage gained by purchase from the Forest Department is that the latter is in a position to guarantee the correctness of species whereas the statement of a contractor, who supplies sawn timber, as to the species to which the timber supplied belongs cannot be relied upon and Public Works officers may from time to time be purchasing wood of inferior quality to that for which they are paying.

(3) The substitution of cheaper classes of wood for teak and other high priced timber should also be resorted to. As an instance it ought to be possible to supply seasoned sal at a reasonable rate for use in the East Coast districts. In order to ensure that hitherto untried species of wood should be utilized for building construction, if proved, after testing and experience, to be suitable therefor, the Engineering College should be directed to carry out mechanical tests of all timbers which the Forest Department recommends for trial.

(4) Brick and mud should be substituted for brick and mortar to a greater extent than is done at present. The lower courses on the ground floor might be set in mortar and a white-ant-proof course inserted at a reasonable height above the ground floor level.

(5) The employment of the jack arch as a method of roofing with light steel joists or second hand rails should prove economical.

(6) Flooring should be made of the cheapest form of durable material so as to avoid continual repairs to floors. The use of kacha material should be abandoned except where rammed earth floors are considered suitable.

VIII.—REVISION OF ESTIMATES.

44. The two main causes of revised estimates are—

- (1) Alterations in design.
- (2) Revision of rates.

Increases due to the first of these two causes can to a larger extent be avoided if the designs have in the first instance been carefully scrutinized by the administrative department and finally approved prior to the preparation of the detailed estimates. Subsequent alterations in design suggested by the administrative department should, as a rule, not be allowed and the Committee have elsewhere suggested that the Executive Engineer should in his discretion be entitled to decline to accept such alterations.

Minor causes of the revision of estimates are—

- (1) Deviation in materials.
- (2) Insufficient provision in the original estimates.

These may be covered by the authority possessed by Executive and Superintending Engineers to incur additional expenditure to the extent of 5 per cent in excess of the estimate.

The attention of the Committee has been specifically invited to a number of cases of revised estimates which are set forth in annexure E. The Committee have given careful attention to these special cases, so far as they could be judged from the information placed before them, and their opinion is expressed below:—

(1) *B-I and B-II, Police Lines at Popham's Broadway.*—The Committee are unable to say on the ascertainable facts whether the delay in execution that occurred in this case was reasonable. They, however, ascribe the necessity for increased rates to the delay that did occur.

(2) *Council Chamber, Fort St. George.*—The increase in this case was due to the additional work involved.

(3) *Quarters for European Nurses—General Hospital.*—The rates have not been revised.

(4) *New Medical School, Tanjore.*—The original estimate was sanctioned on the 7th February 1918 and the work was commenced in the same year. Had the contractor placed his order for materials in the year 1918–19 when funds were allotted in the budget, the necessity for revision of rates under teakwood might have been avoided. The cost of labour and other materials has, however, risen considerably between the date of the sanctioned estimate and the present time.

The increase of rates, in so far only as it was due to this cause, operating as it did on a work the construction of which was commenced in 1918 and is still in progress, appears to the Committee to be capable of justification. The increase under this head amounted to Rs. 22,500, that under fittings and furniture to Rs. 18,250 and the provision for new items to Rs. 23,750. The provision for furniture, fittings and new items would not have operated as a cause for delay, the reason for which must be sought elsewhere. It may be remarked that the new items include a bonus to the contractor of Rs. 7,065, which does not appear to have operated to accelerate the progress of the work.

(5) (a) *Vizia Vilas.*—The allotment was not exceeded.

(b) *Saraswathi Mahal.*—The excess is due entirely to the provision of extra items and to the substitution of a different form of flooring.

(6) *Kudala Deputy Tahsildar's office.*—The Committee are of the opinion that the construction of this work, for which the estimates were sanctioned in 1916 and which has not yet been completed, has not throughout been handled in a satisfactory manner. They believe that if the work could have been assigned on a definite contract on the schedule system, the difficulties might to a large extent have been avoided.

(7) *Cimbatore Medical School.*—This work was administratively sanctioned on the 8th April 1918. Technical sanction was accorded on 18th October 1918 and Rs. 10,000 were provided in the same year's budget. Work was commenced before the close of the year. The work is not yet complete after four and a half years and a revised estimate has now been submitted showing an increase in rates of Rs. 29,000. The main cause for the revision of rates is the delay in the execution of the work. In some cases the rates appear to have been unnecessarily enhanced, but, on the whole, it may be stated that, in view of the great delay that has occurred

in the execution of the work, the enhancement of rates can to a large extent be justified. The Committee must be content with recording their opinion in this as in other cases that the revision of rates could have been avoided had the execution of work been expedited. They feel that it is Government, and not the Committee, that should investigate whether the delays can be justified.

(8) *Civil Hospital, Vizagapatam.*—This work was executed departmentally at a small increase of cost over the original sanctioned estimate. The estimate was sanctioned in 1917 and the work is nearing completion. Even if overhead charges are added to the original estimate, the work appears to the Committee to have been constructed at a reasonable cost.

(9) and (10) The Committee have no comments to offer.

(11) *Central Jail, Salem.*—In this case, the departmental method of construction proved cheaper than the lowest tender.

45. The Committee are of the opinion that the revision of estimates and delay in the progress of works are more likely to arise under the piece-work contract system than under any other method of execution of work. They are informed that with the exception of items (2), (8) and (11) all the specific cases referred to were constructed on the K-2 system which has no time limit and under which the contractor's position is insecure. It seems essential that if delays, with the consequential revision of estimates, are to be avoided, more importance must be attached to the rights of the contractor, greater security provided for him and prompt payment for work ensured. The type of contract recommended is one under which both Government and the contractor would be cast in damages if either of them through default or negligence should contribute to delay in execution.

46. In two cases in which the work was executed departmentally, viz., the Council Chamber and the Civil Hospital, Vizagapatam, the cost of construction does not include the cost of the works staff and overhead charges. In estimating the actual cost of those buildings, as compared with the amount originally estimated, this fact must be taken into consideration. The alterations and improvements to the Central Jail, Salem, were carried out by the divisional staff and the overhead and administrative charges would not, probably, amount to more than 2 per cent.

IX.—PUBLIC WORKS DEPARTMENT WORKSHOPS.

47. In the Government Order which constituted this Committee it was requested that 'the inquiry should extend to a review of the cost of production and materials in the workshops of the department'. The Committee regret that no satisfactory review is possible owing to the fact that the accounts of the Public Works Department workshops, although maintained on a capital and revenue basis, are not prepared on the same lines as the accounts of private commercial firms. Several members of the Committee are however acquainted with the workshops and a note has been prepared by the Superintendent which is published as annexure F to this report, dealing with the comparative cost of work executed in the workshops and by private firms. From the figures placed before them it would appear that the cost of work done in the departmental workshops is, on the basis of the present calculation, less expensive than the cost of work done outside. It would also appear that certain classes of work cannot be executed by local firms in Madras owing to lack of the necessary equipment. All officers of the department, who have been consulted in the matter, are of the opinion that the continuance of the Government workshops is essential. The Committee are not prepared to express a definite opinion as to the desirability of the retention of the Public Works Department workshops—a question that has not been put before them—but would recommend that the annual accounts should be drawn up on the lines employed by private manufacturing concerns.

48. The Committee have been informed that the Department of Industries has recently opened a workshop in Madras. They consider it uneconomical to have two Government workshops in Madras situated close to one another, each carrying out repairs to plant and manufacturing spare parts. They have also been informed that there are occasions when there is a shortage of work in the Public Works workshops.

Absence of orders must result in an increase in the incidence of overhead charges which might to some extent be mitigated by the amalgamation of the 'Industries' and the 'Public Works' workshops.

X.—AMALGAMATION OF THE PUBLIC WORKS 'BUILDINGS AND ROADS' BRANCH AND THE LOCAL FUND ENGINEERING ESTABLISHMENTS.

49. The lack of economy involved in the existence side by side in the districts of this and other provinces, of two separate engineering establishments engaged on the same class of work was pointed out by the Public Works Reorganization Committee and has been considered by nearly every one of the numerous committees that have since then dealt with the Public Works Department. The Committee agree that it would increase efficiency and secure economy if all work involved in the construction and repairs of buildings and roads in a district were placed in the hands of a single works department. The creation of such a department would involve the separation of 'Irrigation' from 'Works', but would also secure further economy by the amalgamation of the 'Major' and 'Minor' irrigation establishments. The desirability of giving effect to this amalgamation is admitted not only by this Committee but by all Committees that have dealt with the question. It has not however been found possible to put the scheme into effective operation as the question of control has hitherto provided an unsurmountable barrier. Local Fund Engineering work is carried on at present under the technical supervision of the Public Works Department and it is proposed to provincialize the service of District Board Engineers. If therefore the suggestion to hand over all Government works to Local Bodies were given effect to, the Engineering staff other than subordinates would remain under the control of, and the greater part of the work would remain under the technical supervision of, the Government and not of the concerned Local Bodies. The majority of the Committee therefore considers that the amalgamation of the two engineering establishments should be effected in such a manner as to place the responsibility for the establishments and the technical supervision of work under a Government Roads and Buildings Engineering Department. The financial and administrative responsibilities of Local Boards would remain the same as at present and the Roads and Buildings Department would execute Local Fund work on behalf of Local Boards in the same way as it at present executes work on behalf of the administrative departments of Government. Local Bodies should not however be entirely divorced from the supervision of the execution of their works in a district. It is therefore suggested that a 'Roads and Buildings' Board should be constituted in each district on which both Government and Local Bodies should be represented. The Board might consist of the Collector of the district, the President of the District Board, the Executive Engineer and the Vice-President of the District Board. As an additional means of securing that the interests of Local Boards shall be adequately safeguarded, it is recommended that the portfolios of Local Self-Government and Roads and Buildings should be assigned to the same Minister. Although the majority of the Committee is convinced that a scheme of this nature would operate economically and satisfactorily, they are constrained to admit, and in this opinion they are reinforced by the views of the two Presidents of District Boards who are members of the Committee, that it is most unlikely that District Boards would consent to the proposal. An alternative proposal has been put forward by Mr. Ramalingam Chettiyar and Mr. Balaji Rao Nayudu, viz., that all Government works should be executed by the District Board Engineering establishment. The majority of the Committee however regrets that it is unable to recommend the proposal for acceptance.

50. In annexure G will be found an abstract of the opinions of the various committees which have dealt with the question of the transfer of the execution of Government works to local boards.

XI.—THE QUESTIONNAIRE.

51. The Committee have been asked to take into consideration the questionnaire annexed to G.O. No. 912 W., dated 22nd September 1922. A considerable number

of the points raised in the questionnaire has been dealt with in other sections of the report. The views of the Committee with regard to the points at issue are however summarised below for convenience of reference:—

(1) (a) *Are the methods of accounting for works different in the different departments?*

Yes.

(b) *Is there any reason to suppose Public Works Department accounts are more accurate than those of other departments?*

Yes.

(c) *Is audit equally strict and complete?*

Audit is more strict and more complete.

(2) (a) *How are buildings accounts kept?*

In the manner prescribed in the Public Works Department Code.

(b) *Salt Department buildings are said to be cheaper than Public Works Department. Is this due to a lower standard of execution, cheaper materials or labour, inaccurate accounting or any other cause?*

The Committee have no information as to whether similar buildings constructed of similar materials and to similar designs are erected more cheaply in the Salt Department.

(c) *Are the maintenance charges higher for the cheaper type of construction?*

Yes.

(d) *If so, is the cheaper type economical?*

Where permanence of structure is desired, the pakka type of building is more economical. If permanency is not desired, the kacha type of building may be adopted.

(3) *Do the schedules of rates of the various public bodies, Municipal, District Board, Public Works Department, show that Public Works Department rates are higher than in other departments or services?*

The Committee have examined the schedule of rates adopted in the Public Works Department, by local boards and by municipalities, in various localities in the Presidency, and find that, whereas prior to the war the Public Works Department rates were in many cases on a lower scale, they have now in the majority of instances been raised to a higher level than that adopted by local boards. Municipal rates however are in the greater number of cases higher than those adopted by the Public Works Department. So far as local boards are concerned, there is no evidence that their rates are in practice adhered to, and the opinion of the Public Works officers consulted is to the effect that they are not. Mr. Ramalingam Chettiyar, the President of the Coimbatore District Board, states that the Local Fund rates, which are in his district lower than the present Public Works Department rates, are as a rule adhered to. The President of the District Board, Kistna, who is also a member of the Committee, states that the District Board and Public Works Department rates in Kistna district have been equalized. Mr. Greg has informed the Committee that equalization has taken place in Guntūr also.

(4) (a) *What percentage of profit to a contractor is it reasonable to provide?*

There should be no provision for contractor's profits in the estimates.

(b) *Does Public Works Department give contractors larger profits than other employers, private or public?*

If the question means "Do contractors make larger profits from the Public Works Department than from other employers, public or private?" the Committee regret that they have not been able to secure evidence on the point.

(5) (a) *How are contracts allotted?*

By tender or by selection.

(b) *If by tender, what action is taken to get the lowest tender?*

By notification, by publication and by personal intimation.

(c) *What action is taken to hold the contractor to his tendered rates?*

The piece-work contract system, which is the system to which the Public Works Department works, does not make particular provision for holding the contractor to the execution of any specific quantity of work at his tendered rates.

(6) (a) *What are the causes of repeated revisions of estimates in recent cases?*

- (1) Alterations in design.
- (2) Delays in execution.
- (3) Rise in prices.
- (4) Change in materials employed.
- (5) Alterations in foundations and other unforeseen conditions.

(b) *Do the same causes operate in other departments, or in other countries?*

Yes.

(c) *Are they unavoidable?*

In the majority of cases they are avoidable.

(7) (a) *Are the buildings erected by the Public Works Department unnecessarily extravagant in accommodation or elaborate in design?*

The answer is in the negative.

(b) *How are type-designs fixed?*

Type-designs are fixed in consultation with the administrative and Finance Departments.

(8) *What are the causes of delay in preparation of schemes or in execution thereof? What can be done to minimise them?*

These points have been dealt with in other sections of the report.

(9) *How does the actual cost of works carried out by the Public Works Department compare with that of similar works done by private employers taking into account all the factors involved?*

The Committee cannot form a definite opinion on the point in the absence of sufficient evidence of the cost of private works.

(10) (a) *Are the charges for 'establishment, tools and plant' levied in the Public Works Department excessive?*

The percentage charges levied for the execution of local fund, municipal and other contribution works are $2\frac{1}{2}$ per cent for supervision, $1\frac{1}{2}$ per cent for tools and plant, 1 per cent for audit of accounts. The Madras and Southern Mahratta Railway is proposing to charge $12\frac{1}{2}$ per cent for work carried out on behalf of other departments. The rate is reasonable and may be adopted, the charge being distributed on the following basis:—

- | | |
|---|--------------------------|
| (1) Audit of accounts | 1 per cent. |
| (2) Tools and plant | $1\frac{1}{2}$ per cent. |
| (3) Preparation of plans and estimates | $2\frac{1}{2}$ per cent. |
| (4) Measurement, preparation of bills, calling for and accepting tenders. | $2\frac{1}{2}$ per cent. |
| (5) Supervision | 5 per cent. |

With regard to water-supply and drainage schemes, the same rate of $12\frac{1}{2}$ per cent may be adopted for the items specified. An additional charge of 5 per cent may be levied as a separate charge for the preliminary investigation of schemes.

(b) *Have private contractors to incur similar charges?*

Yes.

(c) *Are their charges less than in the Public Works Department?*

No contractor is prepared to furnish information on this point.

(d) *Are the works executed by them of the same strength and durability?*

The exact implication of this question is not understood.

XII.—DEBIT OF CONSTRUCTION AND MAINTENANCE CHARGES OF WORKS TO ADMINISTRATIVE DEPARTMENTS.

52. The Committee consider that it would be advantageous if the present practice of debiting all public works charges to a separate budget known as the Civil Works Budget were discontinued. They consider that the cost both of original works constructed on behalf of any of the departments of Government and of the maintenance thereof should be debited to that particular department under the appropriate major head.

53. The existing system of Government accounts recognises the following divisions:—

- (a) Civil head of account.
- (b) Public works head of account.

These comprise a number of subdivisions called 'Major heads of account', e.g., '5. Land Revenue,' '3. Forest' and '41. Civil Works' under Public Works.

54. The recognition of a separate Public Works head of account (viz., '41. Civil Works') implies that all expenditure on Civil Works incurred by Public Works Officers should be charged to this head. In paragraph 42 of the Government of India's Circular No. 3 P.W., dated 24th September 1921, it is laid down that 'all revenue and expenditure relating to Public Works under the administration of the Public Works Department must necessarily be charged to their grants (i.e., grants of the Public Works Department)'. Under the existing rules expenditure on all Government buildings used or intended for purposes connected with general administration and incurred by Public Works Officers is debited to '41. Civil Works.'

55. If the expenditure on building works is charged to the departmental major heads, the accounts of the works will continue to be maintained by the Public Works Department. The administrative department will be responsible—

- (1) for selecting and including works in the budget with due regard to their urgency,
- (2) for securing the necessary provision of funds in the budget and providing during the year for such reappropriation as is found necessary,
- (3) for seeing that only works for which detailed estimates have been technically sanctioned are included in the budget,
- (4) for delays in execution of works which are due to the insufficient provision of funds for the works.

56. In cases where estimates have been prepared by the Public Works Department but the estimates have become infructuous either owing to the abandonment of the original plan or to the abandonment of the work itself, the concerned department should pay suitable centage charges for the time and labour spent in preparing the detailed plans and estimates.

57. The Committee are of the opinion that, if the proposal which they have outlined in this section of the report is given effect to, a considerable weight of responsibility will be transferred from the Public Works Department to the departments which should rightly be held responsible, i.e., the administrative departments that have demanded the construction of the work.

R. W. DAVIES (*Chairman*).
J. R. MARSH.
T. A. RAMALINGAM.
L. H. GREG.
C. E. WOOD.
T. BALAJI RAO.
H. A. IRWIN.
P. RANGANAYAKULU (*Secretary*).

ANNEXURE A.

Systems of Execution of Works.

1. The Public Works Reorganization Committee (1917) on existing and proposed systems.
2. The United Provinces Public Works Committee (1922) on lump sum contracts.
3. Mr. H. W. Barker on lump sum contracts.
4. „ W. H. Nicholls on the English contract system.
5. „ P. Hawkins on systems of execution.
6. „ N. Swaminatha Ayyar on systems of execution.
7. „ O. R. Narayanaswami Ayyar on systems of execution.
8. The Bengal Retrenchment Committee.
9. „ Inchcape Committee.

1. *Extract from the Report of the Public Works Department Reorganization Committee.*

Description
of the
methods at
present
adopted for
the execution
of works.

24. All work carried out by the Public Works Department is executed by one of three methods, either by piecework, or by contract, or by the employment of departmental labour. Piecework is the system chiefly employed. A piecework agreement is essentially a continuous tender by the contractor to execute specified work at specified rates without reference to quantity or time; if the contractor proves unsatisfactory, the Engineer in charge can dispense with his services at any time by paying for the amount of work executed up to date, and similarly the contractor is at liberty to cease work whenever he desires to do so. Piecework contractors have usually little or no professional knowledge and employ no supervising staff, all supervision being carried out by Government agency; they provide the labour and in most cases the ordinary building materials. Contract entails a regular legal agreement for the construction of a complete work either at a lump sum or more usually in accordance with a schedule of rates, and is seldom adopted except in large centres where firms of standing and repute are available. The up-country contractor employs for the most part no professionally skilled supervising agency, and the Government staff usually sets out, supervises and measures the work, and supplies most of the tools and plant required and the stores imported from England. The execution of works by the direct agency of the department employing daily labour is ordinarily practised only in the case of petty repairs or in places where circumstances are exceptional and not even piecework contractors are available. When carrying out work departmentally the Engineer in charge takes the place of the contractor, employing his own labour and either manufacturing his own materials or purchasing them at market rates; this method therefore entails constant supervision and complicated accounting. As already stated piecework is the method mainly employed, in some cases tenders being accepted for completed work, in others for labour only. We were informed that in Madras, during the past five years, no less than 42,467 piecework agreements have been entered into as compared with 625 regular contracts.

Discussion of
arguments in
favour of
the piecework
system.

25. The majority of the officers of the Public Works Department who have given evidence before us have declared themselves in favour of the piecework as opposed to the regular contract system. Their main contentions are that the large contractor, as the term is understood in more advanced countries, is practically non-existent in India, that the contractors available are nearly always middlemen and not professional builders, employing pieceworkers for the execution of their works, and that hence they demand higher rates than the piece-workers would be content with if employed directly while requiring the same amount of supervision on the part of the departmental staff. Our inquiry shows that the number of reliable firms of contractors employing skilled staff is extremely small outside Calcutta, but it appears to us that the main reason for the absence of the master contractor lies in the Public Works Department itself. As now organized that department, with its detailed subordinate supervision, is working rather as a body of contractors than of engineers, and there is consequently no room for the introduction into the system of a further contracting agency, but we can find no reason why, if the organization

of the department is suitably modified, contractors in the accepted sense of the term should not arise in India as in other countries. The 'middleman' contractor appears to us to be a direct outcome of the present system, and we doubt whether under a different system he could survive in competition with a regular contractor who would, in his own interests, employ the most economical methods and act as middleman only when compelled to do so by circumstances. In the absence of such contractors, and with the Public Works Department organized as at present, it is doubtless cheaper for the latter to employ their piece-workers direct, but it must be remembered that Government is in reality playing the part of the master contractor itself and incurring large expenditure on staff which should not rightly be charged to the establishment of the employer at all. Whilst we are wholly unable to accept the extreme recommendation made to us by some witnesses that reliable firms of contractors should be entrusted with works without any supervision beyond the inspection of the completed project, a system that is not followed even in England, we believe that the detailed supervision exercised by the Public Works Department under the present system could be reduced by the employment of such firms. With the growth of the system it will be possible to secure the employment by contractors of qualified engineers, who will relieve the Government staff of their present executive duties and render necessary the maintenance of only a small inspecting staff, with a permanent clerk of works on each large work or group of works. The existence of the present large subordinate supervising establishment deters reliable firms from tendering for Government works, and even if its status is improved as recommended by us, it is in itself an effective bar to the employment of qualified engineers by contractors. Nor do we believe that the piece-work system is conducive to economy in other directions. Not only must the present multiplicity of petty contracts increase the sum total of the contractors' incidental expenses to a figure considerably in excess of that which a single contractor would incur, but in addition Government suffers from the inconvenience that the progress of the whole work may be delayed by any single piece-worker. The limit of time allowed for completion finds no place in a piece-work agreement, and we consider that this is a serious defect in the system.

Several witnesses have urged that it is advantageous for Government to have the power to terminate the agreement at any moment, and that it is much easier to make a piece-worker demolish bad work or remove inferior material than a contractor. This contention appears to indicate an error in the departmental methods of dealing with contractors and to confirm certain evidence given before us to the effect that there is a tendency on the part of the engineers to condone breaches of contract rather than to suffer the inconvenience of a change of contractor. We received evidence that small contractors actually rely on such lenient treatment to tender at very low rates in the hope of getting the contract and later, during the execution of the works, of obtaining a rise in rates. If this is the case it indicates a serious flaw in procedure, since increases of rates during construction render competition nugatory and consequently prevent tendering by respectable contractors, who refuse to quote rates at which they know they will be unable to

complete the work. One of the reasons given for the preference for piece-work agreements is that contracts are more likely to lead to litigation and not infrequently fail to stand the test of a civil court. The remedy for this defect is to revise the standard forms of contract in accordance with past experience. Contract documents should be properly drawn up in the first instance and thereafter be fully enforced; and, except in very special circumstances such as war conditions, all rates, specifications and conditions should be strictly adhered to. Government will then be in a stronger position than it is at present in regard to the piece-worker, who can throw up the work at any time if his demands for increased rates are not met.

It has been suggested that the major portion of the work of the department is scattered throughout the districts and is hence unattractive to large contractors. Whilst this is largely correct, we believe that in time contractors will extend the sphere of their operations from the larger centres into the districts, and we consider that they should at least be given every opportunity of doing so before other methods are adopted.

As will be seen from the arguments enumerated above, there is a tendency on the part of the engineers to judge the question from a purely departmental stand-point. We consider, however, that it should be viewed in a wider aspect, and as a result of our inquiry we are impressed with the necessity of encouraging the growth of contractors, a measure which we believe will tend to general industrial development and will give to the building and allied trades a stimulus which they at present lack. The introduction of the contract system will afford new openings for indigenous firms employing indigenous trained staff. We consider that, in judging this question, a prominent place should be given to these aspects and that immediate economy should be regarded as only one consideration among many.

Recommendations for the encouragement of private enterprise in the execution of public works.

26. At present the number of regular contractors and contracting firms available in India for the execution of public works is very limited, but we recommend that the policy of Government should be directed to the encouragement of the growth of such a class. We are of opinion that this can most suitably be done by inviting tenders for complete works and by the introduction of the system of lump sum contracts, and our recommendations are therefore framed on these lines. We realize that advance must be gradual, but we believe that, if our proposals are accepted, a class of contractors will grow up to whom it will be possible to entrust work without the necessity for the present detailed subordinate supervision.

(a) *Original works.*—We recommend that tenders should invariably be invited in the first instance for the complete work in the case of a building, or for a substantial contract in the case of a road, and that, if such tenders are received, the whole work should be given to a single contractor, even if the resulting cost is likely to prove somewhat greater than that at which it would be possible to execute the work by piecework. We further consider that it should be incumbent on the officer empowered to accept the tender to record for the information of his superior officer his reason for refusing any tender for a complete work and accepting a tender for a part only of the work.

We also recommend a more extensive use of the lump sum contract, and consider that the introduction of this system in its entirety is the ultimate policy to be aimed at, by lump sum contract being understood a contract for the complete execution of a work at a fixed sum, accompanied by a supplementary schedule of rates upon which additions or deductions can be calculated. The form of contract should lay down that the contractor must set out the work himself and maintain a whole-time competent foreman on it, and should also specify a time-limit. The terms of the contract should be rigidly adhered to, and no revision of the fixed sum permitted on the grounds of omission or mistake. We believe that this system will lead contractors to employ qualified staff, since under it the contractor will be responsible that the classes of workmanship and materials are in accordance with specification (a responsibility which at present rests mainly with the officers of the department) and thus lead eventually to the reduction of the Government supervising establishment. In view of past practice, we consider that due warning should be given to all contractors, if necessary by public notice, that no revision of the terms of the contract will be permitted after once the tender has been accepted. There will probably be little or no saving in supervision at the outset, but this will come in time, and we recommend on this ground that preference should be given to lump sum contracts, provided the contractor is reliable, even if the cost of the work is thereby somewhat enhanced. Two arguments have been raised against this system, firstly, the increased risk of litigation inherent in a lump sum contract and secondly, the fact that contractors may send incompetent supervisors to take charge of works at a distance from their principal place of business. In regard to the first there is a possibility of litigation at the outset, but litigious contractors will cease to be employed and the evil will hence cure itself. As to the second, if contractors are so blind to their own interests, they will be responsible for the failure of private enterprise generally and their own in particular.

(b) *Repairs*.—In regard to repairs we consider that the present piece-work and departmental systems are, on the whole, suitable.

2. Extract from the Report of the United Provinces Public Works Committee.

44. The Committee recommends that after sanction has been finally accorded to a project, the arrangements for the execution of the work should be made in all cases by the Public Works Department. They contemplate, as a general practice, execution by lump sum contracts, but they would remark that so far as major buildings are concerned, their scheme does not depend on the success of the system of lump sum contracts, nor are the reductions of staff which they propose possible only in that event. The Committee need not repeat the remarks which were made by the Reorganization Committee, in chapter III of their report, on the present form of contract, or the arguments which led that Committee to consider that "the introduction in its entirety of the system of lump sum contracts is the ultimate policy to be aimed at, by lump sum contract being understood a contract for the complete execution of a work at a fixed sum, accompanied by a supplementary schedule of rates upon which additions or deductions can be calculated." With this recommendation this Committee is in complete agreement.

That there will be difficulties in introducing the system was recognized then, and these difficulties remain; there is a danger of litigation; local contractors, especially in the smaller centres, may be unwilling to face the risk of loss and may prefer to carry out contracts based as now on scheduled rates; alterations of design after the contract has been given out will be difficult to effect; a heavy responsibility is laid on the officers who prepare the estimates, for on the accuracy of their bills of quantities the economy of the contract depends. But these difficulties are certainly not insurmountable, and they are much more than balanced by the advantages, for without lump sum contracts it would be impossible to establish the building trade of the province on satisfactory lines.

The Committee acknowledges that in many cases the present system must continue for a time, but recommends that in all cases tenders should first be invited for a lump sum contract on the basis of the plans and bills of quantities. Every tender should be accompanied by a schedule of rates which would show how the lump sum for which the tender has been made had been arrived at, this schedule being sent in separately and being treated as confidential; it might be the same as or different from the schedule of rates for additions or deductions.

3. *Note on lump sum contracts by Mr. H. W. Barker, A.M.I.C.E., F.S.I., of Messrs. Jackson and Barker, Madras.*

In my experience, Civil Engineering contracts in England are usually let on the basis of payment for the work actually done and performed.

I was directly concerned in England in two contracts for builders' work which were let on what are called lump sum contracts and was indirectly connected with other contracts let on that basis by Architects.

I wish to make it quite clear that a so-called lump sum contract is not essentially or even usually completed for the precise amount of the contract.

In my experience, no matter what form of contract is adopted, the employer has to pay for the work actually done and performed. The relation between the amount of the contract and the actual amount paid depends upon accuracy of the drawings and other particulars as compared with the work actually carried out.

Lump sum contracts are usually let under one of the two following conditions:—

First alternative.

(1) The drawings for the proposed buildings are sent to a building contractor who takes out his own details of the various classes of works required and tenders a lump sum for carrying out the work.

I believe this system is adopted only for small contracts and only to a limited extent. It may be used sometimes for larger works by an Architect with a contractor in whom he has reliance.

If the sum tendered under this alternative is to be a reliable guide as to the actual cost of the building, it requires—

- (a) that the drawings shall be very complete and shall supply full information of every item of work which is required;
- (b) that the contractor shall be able and willing to prepare his own bills of quantities to enable him to arrive at a reliable estimate of the work;
- (c) that no appreciable alterations in the design are made after the contract is let or ordered during construction;
- (d) a specification of the quality of materials and workmanship required;
- (e) a full and accurate description of all work which is not clearly shown on the drawings;
- (f) a schedule of rates by which the value of variations may be ascertained.

In this case the work of preparing bills of quantities is really undertaken by the contractor who to recoup himself undoubtedly increases his rates.

I do not think there are contractors in Madras City and, from what I have been told, there are certainly no contractors in the mufassal capable of preparing a tender under this alternative.

Second alternative.

(2) The drawings prepared by the Architect are sent to a quantity surveyor who prepares complete and accurate bills of quantities which give the exact amount of each class of work required to complete the building as shown on the Architect's drawings.

If the sum tendered under this alternative is to be a reliable guide as to the actual cost of the building, it requires—

- (a) That the drawings sent to the quantity surveyor shall supply full information of the whole of the work required to complete the building in accordance with the intentions of the Architect.
- (b) That the quantity surveyor shall prepare accurate bills of quantities giving the precise quantity and a detailed description of all the classes of work required for the building.
- (c) A specification stating the quality of materials and workmanship required.
- (d) That the contractor be capable of understanding all the items described in the bills of quantities.
- (e) Adequate supervision to ensure that the work is done exactly in accordance with description given and of the quantities provided in the bills of quantities.

Measurement of lump sum contracts.

If a lump sum contract is entered into, it is not usual to measure up the whole of the work as it proceeds, but only to measure up the variations; in the case of the first alternative from what is shown on the drawings and in the case of the second alternative from what is stated in the bills of quantities. For example, if the depth of the foundations is shown on the drawings to be 3' 0" deep below ground level, in the first case the builder and in the second the quantity surveyor will have so provided. If at the time of construction it is found necessary to have the foundations 4' 0" deep below ground level, the extra work will have to be measured and paid for. Ordinarily the condition will not be so simple as that used for illustration, as probably some parts of the foundations will have to be 4' 3" deep, others 4' 0", others 3' 6", and so on; and to arrive at the difference between the work done and that included in the contract, it will probably be necessary to measure up the whole of the work up to ground level.

To avoid the necessity of measuring up the whole of the work under the second alternative, it requires that the contractor and employer shall have confidence that the bills of quantities truly describe and give the correct quantity of every class of work in the building.

In English practice detail measurements showing how the quantities of the various items are arrived at by the quantity surveyor are not supplied for the contractor.

Public Works Department.

From what I have seen, I do not think that the 'estimates' (more correctly bills of quantities) of the Public Works Department are prepared in sufficient detail nor with the precise accuracy nor with the full descriptions of the various classes of work required to enable the value of the work done to be arrived at by merely measuring up the variations.

I do not think the contractors would be found at present who would be willing to rely on the 'estimates' being of sufficient accuracy to ensure correct payment, if only variations were measured.

I understand that in Public Works Department buildings it very often happens that extensive deviations from the original proposals are required when the work is in progress. In such a case probably it would be necessary to measure up the whole building to arrive at the sum due to the contractor, even if a lump sum contract had been let.

Retrenchment.

While it has no direct connexion with the subject on which I have been invited to give my experience, I suggest to the Committee that if it is desired to curtail expenditure in the Public Works Department one way would be for that department to cease to undertake work of a private and semi-private nature, leaving this to local authorities and private enterprise. I have in mind such work as the design or supervision of construction of hospitals, schemes of water-supply and drainage for municipalities, buildings for such bodies as the University and buildings, the cost of which is to be met in whole or in part by public subscription, such as the Keti Homes, the Prince of Wales Hospital and the Victory Memorial.

4. *Note by Mr. W. H. Nicholls, F.R.I.B.A., regarding building on the English contract system.*

It is true that the English contract system encourages competition and that competition is the principal factor tending to reduce cost of production whether of buildings or other commodities.

I think that the English (or lump sum) contract system might well be applied, to begin with, in cases such as the erection of small type-designs in which case it would be possible to insist upon the contractor copying an existing building.

Police huts, for instance, might be erected in this manner, a clause in the agreement citing a properly built existing specimen which would serve as an indisputable standard of the quality of workmanship and materials required.

But in cases where no proto-type exists, and where it is impossible to establish a definite standard except by using lengthy descriptions in highly technical language, the notion that the introduction of the English contract system will promote either efficiency or economy in present conditions in Madras is in my opinion not only illusory but fraught with dangerous consequences.

The 'English contract system' means that payment is made not on the basis of measurement of executed work, but in accordance with the amount of the accepted tender. It follows that if the system is to work satisfactorily—

(1) The documents forming part of the contract (drawings, specification and quantities) must be highly technical and explicit.

(2) The contractor must be highly educated in building lore to understand the documents and execute the work.

(3) There must be expert supervision on the part of a Clerk of Works who spends his whole time on the work to see that the contractor complies with the documents.

With regard to the documents—

In England the drawings are made by the Architect, the specification is usually written by the Quantity Surveyor in consultation with the Architect; the quantities are measured by the Quantity Surveyor. The Architect does not prepare quantities nor learn how to prepare them.

There is in India no professional class of Quantity Surveyors. Here quantities are measured by a draughtsman. It is not possible for me to check them. I have been told by a member of the Surveyor's Institute that the sketchy form in which quantities are billed in India is quite unsuitable to form part of a contract on English lines. It is essential to the contract system that the quantities should be prepared by a professional person whose figures both the Architect and contractor are prepared to accept. The contractor frames his tender upon the quantities, specification and drawings, and he is paid according to his tender—not according to work done and measured. It is unreasonable to suppose that documents which may suffice for the purposes of a sanctionable estimate when payment is going to be made on the basis of work done and measured, should suffice for the purposes of a contract in which payment is going to be made in accordance with the amount of the accepted tender. It is not possible, by a stroke of the pen, so to remodel the accepted form and practice in respect of specifications and quantities as to adapt them to the contract system. In Delhi.

a Fellow of the Surveyor's Institute was put on special duty to prepare quantities, and some of the Public Works Department staff including at least one Executive Engineer were placed under him to learn his methods. Something of the same kind would be necessary here.

An instance may assist the uninitiated to understand what I mean by technical and explicit language in referring to 'documents'. Let me take the comparatively simple case of an ordinary staircase, which according to our current practice might be thus specified:—

"Construct the staircase of teak according to drawing No. 111".

In a specification drafted on English lines to form part of a contract, one would hardly expect to find less than this:—

"Construct the staircase from ground floor to second floor 4 feet between the strings of $1\frac{1}{4}$ inch treads with moulded nosings and 1 inch $\times$ $1\frac{1}{4}$ inch moulding rebated and let in and 1 inch risers all rebated and grooved together, glued, blocked, bracketed and screwed, on three 5 inch $\times$ 3 inch teak carriages housed to $1\frac{1}{2}$ inch wall string with 3 inch $\times$ 2 inch moulding as capping tongued on. The landings to be $1\frac{1}{4}$ inch in 3 inch widths. The outer string to be $1\frac{1}{2}$ inch with 3 inch by $1\frac{1}{2}$ inch capping moulded both edges, and $1\frac{1}{2}$ inch $\times$ 1 inch rebated bed moulding. Fix to the outer face of the string $1\frac{1}{2}$ inch $\times$ 2 inch moulding rebated on back edge and let in. The outer string with its capping and mouldings to be continued along face of landings as apron. The newels to be 5 inch $\times$ 5 inch, square, turned, grooved and moulded to design, with pendants brought below the soffits. The finials and pendants to be cut and turned separately and fixed and glued to the newel with $1\frac{1}{2}$ inch pins turned on. The hand rail to be moulded 4 inch $\times$ 3 inch. The balusters to be 2 inch by 2 inch square, turned, and grooved, with chamfered caps and bases with moulded steps and to be housed to the string and handrail."

Though this is only one of many ways of building a staircase, there is not a word in this description which is superfluous from the point of view of an English contract, and there are very few words in it which any contractor in Madras would understand in their technical meaning.

This brings me to the subject of contractors. Under the contract system it must be realized that the objects of the contractor and the client (or his Architect and Clerk of Works) are in a sense diametrically opposed. The contractor wishes to make a profit. The client wants value for his money. Profit is obtained by doing everything in the cheapest possible manner with the cheapest possible materials. The detailed specification and quantities and the Clerk of Works to enforce them are the chief safeguards of the client's interests.

So long as the contractor is little more than a supplier of labour, incapable of understanding detail drawings and technical terms in specification and quantities, incapable of framing a tender except on the basis of a schedule of rates prepared by the Public Works Department, and incapable of doing many of the items of work required in the building without the fatherly assistance and guidance of the Executive Engineer, it is surely clear that his tender cannot be worth the paper on which it is written, since in signing the agreement he cannot have the remotest idea of what he is undertaking to do.

If, on the other hand, the contractor is a man or firm qualified by experience and knowledge, and possessing capital, there is still greater danger necessitating certain precautions which must be taken by the client if he is not to pay for what he does not get. The contractor being human, and desirous of profit, may be relied upon to effect economies at the client's expense, and to charge 'extras' wherever possible on the plea that this or that was not in the contract.

Not only must the contract documents be highly technical and exhaustive, capable of standing the test of cross examination in a Court of Law, necessitating in their preparation far more time and labour, and in the case of quantities more trained skill than that for which we are equipped; but there must also be available a suitable clerk of works, incessantly on the watch, capable of preparing detail drawings and of knowing and showing how things should be done in accordance with the contract documents. Books have been written on the duties of the clerk of works and I cannot attempt here to explain his many responsibilities; but I may add that for the satisfactory working of the contract system, he must be a man of absolute integrity in addition to possessing practical knowledge of all the trades, and that the clerk of works as known in England is almost as 'rara avis' in India as a Fellow of the Surveyor's Institute.

Without the services of the independent professional surveyor, and without the services of a competent clerk of works, the English contract system, applied to buildings other than those which are merely duplicates of an existing prototype, must in my opinion inevitably lead to disputes, litigation, delays and great expense.

Those who advocate its introduction here in present conditions, in the case of important new buildings, would do well to consider the number of builders in England who get into the bankruptcy court, and the delay and the expense which clients suffer through having to terminate one contract and start another; and if this continually happens in England—as in fact it does—where builders know their business, it is still more likely to happen here.

5. *Note by Mr. P. Hawkins, M.Inst.C.E., Superintending Engineer, Coimbatore Circle.*

Public Works Department System of Execution.—Works in India are executed at present under three systems as described below:—

(a) '*Departmental*' work.—Materials are prepared or purchased and labour employed and paid direct by the department without any intermediate agency. Costs are struck, i.e., the actual cost of the work is checked in comparison with the estimate by measuring up work and working out actual cost per unit.

(b) '*Piece work*'.—Petty piece-workers or 'contractors' are employed, with whom an agreement is executed for the execution of stated classes of work at agreed rates per unit, without any agreement as to total quantity to be executed. The conditions of contract relate solely to price and quality (specification) of work, and in the event of bad or slow work the agreement may be determined at any time. These petty piece-workers or 'contractors' are, in effect, agents for collecting materials and supplying labour, and incidentally for paying the advances, without which it is difficult to collect labour in any quantity, and taking the risk of losing the advances so paid, which not infrequently occurs. The payment of advances from Government funds (except part payments on materials collected) is prohibited by rule. The work is set out, organized and controlled by the Public Works Department who also make all measurements and bills.

(c) '*Schedule contract*'.—The contractor executes an agreement to carry out the whole of a work, at an agreed price per unit of each item of work, by a specified date. The approximate total quantity of each class of work is stated, but is not binding or in any way guaranteed, and the basis of the contract is the rate per unit for each class of work and not the estimated cost of the total quantity, and any 'extras' not provided for in the agreement are paid for at schedule or agreed rates. In practice in India the system is much the same as (b), with the exception that it is a contract for the execution of a complete work, whereas in (b) the completion of the whole work is not one of the conditions of the contract.

The work is set out and in many cases practically organized and controlled by the Public Works Department who also make measurements and prepare bills. The extent to which the work is organized and controlled by the Public Works Department of course depends upon the capacity of the contractor. Some require more assistance than others, but in the majority of cases, particularly in the mufassal, the work is practically controlled by the Public Works Department.

The two systems (a) and (b) are frequently combined, part of a work being executed by piece-work and part departmentally, any particularly difficult parts of the work, or parts where special professional control or technical skill is required, being executed 'departmentally' (a).

Different parts of the same work are frequently executed by different piece-workers (b), e.g., one piece-worker may do masonry and another the timber work, or one supply materials and another build with them. Also, under both (b) and (c) Government may supply materials at an agreed rate, or deduction from the rate for finished work.

2. *Systems of execution in use in Europe.*—The systems of execution of work in general use in England are as follows:—

(I) '*Lump sum contract*'.—The contractor is supplied with complete drawings and specifications, and also a blank schedule of the various classes of work included in the contract, with no quantities. The contractor has to make out his own quantities from the drawings, and tenders for a lump sum for the completed work, and also tenders rates per unit for the several classes of work specified.

Intermediate payments are made on actual measurement at the agreed schedule rates, any unforeseen items not included in the schedule being settled by mutual agreement, and the final payment consists in the adjustment of the lump sum agreed upon plus 'extras'.

(II) '*Contract based on bill of quantities*'.—The contractor is supplied with drawings and specifications and also a guaranteed bill of quantities, prepared by an independent quantity surveyor. The contractor tenders for completion for a lump sum,

based on the bill of quantities, and also for rates for individual items of work as under (I). Intermediate payments are made on actual measurement, at the scheduled rates, and final payment by adjustment of the lump sum amount plus 'extras'.

(III) '*Departmental work*'.—Labour obtained and paid and materials obtained by the engineer staff as in paragraph 1 (a).

In England the contractor under (I) and (II) employs his own construction staff, comprising (on an engineering work) the engineers, known as 'contractor's engineers', foreman (corresponding to the 'maistry' in India, but mostly skilled artisans in one branch or another), etc. The staff does all the setting out, organization and management of the work. They do the measurement and prepare the bills, which are paid by the 'Civil Engineer' who is employed by the client, *after check*. I use the expression 'Civil Engineers' here as convenient to indicate the engineering staff employed by the client, as distinct from the contractor's engineers, who are also of course Civil Engineers. Where the clients are a public body they usually have their own permanent engineering staff who perform the functions of the 'Civil Engineers'. The Government departments who undertake works, such as the Admiralty, also have their own engineering staff. The duties of the 'Civil Engineer' are to prepare the plans and estimates, settle the details of the contract, draw up the contract and deal with the tenders and to see to the proper execution of the contract. Thereafter his duties are nominally confined to the inspection of the work, comparison of work with specifications, seeing that his clients' interests are guarded in the matter of quality and proper execution of the work, and the check of the measurements and bills prepared by the contractor's engineers.

On a work of any importance the 'Civil Engineer' staff, employed by the clients, usually include a resident engineer and also the visiting engineer who inspects periodically. In cases of doubt or difficulty they frequently also retain the services of some well-known Consulting Engineer.

A point to note in this connexion is that under this system the motives and objects of the 'Civil Engineer' and the 'contractor's engineer' respectively are in direct conflict. The 'Civil Engineer' is of course out to obtain for his client the best possible class of work at the lowest possible cost. The 'contractor's engineer', on the other hand, is out to do the cheapest work which he can possibly get in, and to swell the contractor's profit as much as possible. Being in direct charge of the work he is at a considerable advantage in this and the 'Civil Engineer' consequently has to exercise very close supervision.

In the case of architectural work-buildings, the architect for the client employs a 'clerk of works', who performs the same functions as the 'resident Engineer' on an engineering work.

Alterations of an existing building, additions and similar work are usually done on 'schedule contract' or sometimes by what corresponds to 'departmental' work—paragraph 2 (III). A point to note here is that the 'lump sum' contract does not eliminate the necessity for a schedule of prices, or for measuring up the work, or for a considerable amount of executive control, particularly in the case of a large work. The whole of the payments, except the final payment, are based on measurements which, though made by the construction staff, have to be check-measured or remeasured by the 'Civil Engineer' staff. The 'lump sum' factor comes in only in the final payment, and is even then subject to discussion on the basis of 'extras', which involve measurement. The amount of executive work done by the Civil Engineer staff varies in different cases. In some cases they do none. In others they help the contractors staff to set out and organize the work, but this is a matter of convenience.

Comparison of the India and Europe systems.—Consideration of the advantages and disadvantages of these several systems may be assisted by a brief recapitulation of the history of the genesis and development of the contract system in Europe.

Early buildings were constructed mostly by guilds of builders and by local workmen. Time was not 'of the essence of the contract' and they built as funds and circumstances permitted. As conditions changed and demands increased, the functions of the engineer and the architect became separated. At a later stage the

increasing complexity of the works, the introduction of the time factor as an essential, and the resulting demand for capital to finance work brought the professional man, seldom a capitalist, to a standstill, and the outside capitalist was brought in to finance works. From that stage to the undertaking of the works by the capitalist himself with his own professional staff was but a step, and the capitalist became the contractor.

It should be noted here that the system came into being not owing to any inherent virtue in the system itself, but as a matter of expediency, as one way out of a difficulty. Also that, although some contractors fail financially, those who survive usually make large fortunes, which come out of the pockets of their clients.

In comparing the systems in use in England and in India, the first impression might be that they are wholly dissimilar.

The difference lies really not in the system of work, but in the method of employment of the staff.

Under the Europe system, as already pointed out, two separate engineering establishments are employed, one by the clients and the other by the contractor, and the object of the latter is to make as much profit as possible for the contractor. It should be noted here that the client of course pays (through the rates for work) for the contractor's staff as well as for his own.

Under the Indian system the Engineers double the functions of the 'Civil Engineer' and the 'Contractor's Engineer'. They prepare plans and estimates and also set out, organize and control execution. Put into a comparative statement, the process might be compared broadly as follows:—

Indian Public Works Department system.

(a) Plans having been generally approved, Government or the administrative department call upon the Public Works Department for approximate estimates for administrative approval.

(b) Public Works Department submits approximate estimates for administrative approval, and, after approval, prepares detailed estimates for technical sanction.

(c) Public Works Department executes the work, using the detailed estimates as a working basis, and using one or other of the systems described in paragraph 1 above and also make all measurements, bills and payments.

Europe 'Contract' system.

(a) The client, through his Engineer or architect, calls for tenders on the basis of plans, specifications, etc., prepared by the Engineer or architect.

(b) The contractor prepares his own private detailed estimate (unless a bill of quantities has been prepared—see paragraph 2 (II)) and then submits his tenders based on this estimate, allowing for staff, unforeseen extras, and profits.

(c) The Contractor's Engineers execute the work, using the contractor's detailed estimate as a working basis and making measurements and bills.

The client's Engineers supervise the work as regards quality, correctness, etc., check the contractor's measurements and pay the bills.

A large contractor frequently employs sub-contractors in one form or another. Even when sub-contractors are prohibited by the contract they frequently give out 'job work', pay bonus on outturn, etc.

The following points should be noted here:—

(1) The approximate estimate submitted by the Public Works Department corresponds to the contractor's tender, and is practically a 'lump sum' tender to Government.

(2) No contractor would take the risk of tendering on anything but a detailed estimate or a certified 'bill of quantities' (see paragraph 2).

(3) The Public Works Department 'tender' is based more or less directly on actual working rates and thus allow no margin over the working estimate.

(4) The contractor's tender, besides providing for his profits, allows a working margin over the working estimate.

I think that, in order to obtain a correct definition of existing conditions, which we must do before we can attempt to alter and improve them, we must realize the important fact that under the present system Government are in effect their own contractors, employing in one staff both their 'Civil Engineers' and 'Contractor's Engineers.' When work is executed 'departmentally' the middle man is entirely eliminated, and the whole 'profit' goes into the pocket of the tax-payer.

When petty contractors are employed, in one form or another, a portion of the profit goes to them, but whether this profit is at all commensurate with the large profits expected by a regular contractor who accepts considerable financial risks is a point for careful consideration. The evidence appears to be very much in the opposite direction. I think it would be more correct to regard these contractors as little more than agents for the collection of labour and materials.

In any commercial undertaking or investment, the profits demanded are always in proportion to the risk run. The ordinary contractor or piece-worker runs certain risk in connexion with advances to labour. The man who undertakes a complete contract on the Europe system runs much more risk. As already remarked, while those who survive make large fortunes, many fail. Their profits must, therefore, necessarily be larger.

What would be 'failure' of a contractor under this system becomes a 'revised estimate' under the Indian system, i.e., the 'revised estimate' represents the 'contractor's losses' but under the Indian system Government under-writes its own 'contractor's losses', being in a sufficiently large way of business to do so, just as Government or a large shipping firm, under-writes its own fire or other insurance.

6. *Note by Mr. N. Swaminatha Ayyar, Executive Engineer, South Arcot Division.*

The methods at present adopted in this Presidency for the execution of works and for accounting are fairly well described in a general way in the papers printed for the Public Works Department Enquiry Committee; and in this note I will attempt to amplify the same from my experience in the department which, I may add, is connected more largely with the execution of irrigation works than of buildings. Of the three systems in vogue, the departmental execution is resorted to when suitable men are not available or could not be induced to take up works at reasonable rates. It is also adopted in the case of such items of work as cannot be measured regularly and paid for at schedule rates, e.g., baling, clearing slush in foundations, clearing site, etc. This system would have found general acceptance and its adoption would have been more general than it is at present, had it not been for the fact that the men employed on daily wages require to be watched and controlled so that they do not idle away their time or turn out bad work and thus impose an undue burden on the subordinate supervising establishment in immediate charge of the work. Unless the latter is experienced and capable, it will be easily imposed on with the result that either bad work is done, or there is not enough outturn for the labour employed, thus running up the cost of work. Further, there is no direct incentive for labourers to do well and earn more unless they are so good as to be singled out for special treatment. So also very great care is required to be exercised in buying materials, as any bad or unsuitable material will mean loss to Government and an increase in cost of work. It does not seem therefore advisable to resort to this system unless forced to, owing to peculiar conditions or circumstances obtaining at a place, taking care then to post a capable man to be in immediate charge of the work.

Dealing next with the execution of work by 'Schedule contract system', I wish to state at once that it has not found favour because there are no suitable contractors in this Presidency who know their job well and can execute work independently. At best there have been only good business men who have managed successfully by subletting the work to others. The frequent misunderstandings which have often arisen were due to the contractors not knowing things first-hand and to the men employed by them trying to turn things to their advantage. I have not come across one who has been able to draw up specifications, work out rates, and read correctly the plans, etc., with the result that those documents,

when furnished by the department, have not been correctly appreciated and in the end, misunderstandings and disputes leading to failure have always occurred. I have known of a few instances when a firm of so-called contractors who were supposed to know something about the work and tendered for its execution, either asked for unreasonably high rates or did only a portion which was fairly easy and then left off. More recently, I have known of an instance when a regular firm of contractors has sublet the work to another man on easier terms reserving a good margin of profit to itself. Further, the schedule contract system as obtains in this Presidency is nothing more than the piece-work system with the addition of a time-limit to the execution of work. There are no persons available at present who look upon contracting as a paying concern and this, in my opinion, is largely, if not entirely, due to the peculiar conditions which obtain in this Presidency and not to the Public Works Department as organized at present. This might be inferred from the fact that even outside the Public Works Department the system adopted for execution of buildings by private individuals is allied closely to the departmental or the piece-work system; and I am not aware of even a single instance in which the schedule contract system has been employed. One sure result of the adoption of the schedule contract system will be that the cost of the works will have to be increased considerably, if it is to attract qualified men for taking up the job; and Government will, I am afraid, have to pay very much more than what they are doing at present for the jobs, inclusive of the charges for establishment and tools and plant, which, be it said, is not reckoned correctly at present; for, the establishment is not solely employed to look after the execution of works alone but also to do many other items of work connected with the administration of the division or, in other words, even if all works were to be given on schedule contract, still the present establishment cannot be very much reduced; the net result will be increased cost and nothing else.

Lastly, I come to the piece-work system which, as worked out in this Presidency, has got many advantages of its own and is peculiarly suited to the conditions which obtain therein. The absence of a limit of time allowed for completion in a piece-work agreement, is considered a serious defect in the system. Of late, this has been sought to be remedied in one of two ways, viz., (i) the taking of a security deposit for completion of work before a fixed date, failing which, the amount will be forfeited, (ii) the grant of a bonus which will be earned in full or not at all, according as the work is completed before a certain date or not. The former is preferred in those cases where the work has to be finished within a reasonable time, there being no special urgency about it. The latter is preferred in those cases where the work has to be finished urgently against time. Though this means increased cost, it is far better to allow it in the shape of bonus instead of by an increase in rates which, when once allowed, will rarely go down. Another point that is very often forgotten is that when labour and other resources are poor at a place for carrying out a big work, it is no use increasing the rates so as to attract labourers or improve the resources. It will be far better and more economical to import labour and materials by incurring expense and then allow the usual rates only for work, as, in the latter case, the tendency for an increase in rates for local labour and materials will be avoided. If in addition to the above, the supervising establishment keeps itself in close touch with the execution of work and watches its progress carefully, the work will be completed as expeditiously as possible without any room for complaint. Often, the delay in execution is due to other causes such as abnormal weather conditions, non-availability of particular materials required, etc., for which the piece-work system is in no way responsible; and when such causes operate, the schedule contract system will not in any way help to get over them, but will, on the contrary, prove a fruitful source of dispute causing delay, trouble and even loss to Government.

Before proceeding further, I would like to make a distinction between the piece-work system as it is generally understood and petty piece-work or jobwork system. The latter differs from the former in being confined to a single big item or a group of items of a work instead of to the work as a whole. Unless the work is a fairly small one, the splitting up of the work and the adoption of jobwork system

for the several important items will be very advantageous. Otherwise, the piece-worker who takes up the whole work, splits it and lets out the several items on jobwork, reserving a percentage of profit for his share. This may no doubt relieve the supervising establishment in immediate charge of the work, of some trouble; but then the cost of the work will be increased to the extent of the profits earned by the piece-worker as a middleman. So, the ideal system which will conduce to utmost economy is the one in which the important items or groups of items are let out on jobwork. Under this system, the men employed will have an incentive to do well and earn as much as they are capable of, and the work will be carried out at the cheapest possible rates. In this system, there will be necessity to make prompt payments on the security of work done or materials supplied, otherwise, the job-workers will be unable to get on. But this should not be considered a disadvantage, as in case they invest their own money and have to wait for payment, they will naturally expect to earn from the work the interest charges for the money invested and thus swell the cost of the work. It is a fallacy to believe that a multiplicity of petty contracts increases the sum total of the contractors' incidental expenses to a figure considerably in excess of that which a single contractor would incur. The latter's expense is generally higher, owing to lack of intimate knowledge of the workmen; and his unrealized advances on them will naturally have to come out of the work, whereas the jobworker being one of the workmen himself will not suffer from such disabilities. The delay caused to a work by the failure of a single jobworker will be equally present in the work done by a single contractor when one of its units fail and it will be quite as easy to go in for a fresh jobworker as it will be for the contractor to employ a fresh unit. This jobwork system has thus all the advantages in its favour which will conduce to economy in construction, and I have employed it very largely with great success in the Toludur project effecting great savings to Government, and I cannot too strongly advocate its adoption in as many cases as possible especially in large works.

Taking next the lump sum contract system, which is strongly advocated in the report of the Public Works Department Reorganization Committee with a view to encourage sufficiently private enterprise, I wish to state *at once* that the conditions prevalent in the country are not at all suitable for its introduction, nor is it likely that it will ever be so even after some years. Under this system the work will naturally cost very much more than at present not only at the outset, as is admitted by that Committee, but for all time to come, without any compensating reduction in the cost of supervising staff. It is not reasonable to suppose that the subordinate supervising establishment which will have to be entertained by the contractors will either be paid less or work better than that employed at present by Government. In fact the contrary can be easily expected to occur and it will be strange if it were otherwise, when it is considered that they have nothing more to look up to for their advancement than in the profits they are able to earn for their contractors. Further, the adoption of the system of lump sum contract will not in any way dispense with the necessity to entertain establishment by Government, to supervise closely the work done, to take measurements for making intermediate payments and for extras to be paid at schedule rates. Thus, it will be seen, there is nothing to be said in its favour, while it is fairly certain that its adoption will certainly mean increased cost to Government without any compensating reduction in establishment.

Lastly, as regards the new method of constructing small buildings for the use of Government departments, it seems to me more a question of finance than of economy in method of construction. There is, no doubt, something to be said in favour of hiring buildings on rent; and this is being done in so many places with this exception that existing buildings are rented now, while in the method proposed new buildings are required to be built according to Government requirements as regards accommodation, etc., before they are rented. Enterprising men having capital may be tempted to go in for the construction of such buildings as an investment for their capital on condition of these buildings being rented by Government for a term of years. But the plans of buildings should also be such as to be suitable for other purposes in case Government fails to rent it for some reason or other, otherwise the proposal may not be viewed with favour. The calculations made are all on wrong assumptions as regards establishment charges and cannot be accepted.

7. Note by Mr. O. R. Narayanaswami Ayyar, Supervisor, Coimbatore, on the Public Works system of execution.

In my opinion the carrying out of buildings works departmentally will be *cheapest, most efficient and quickest*. It is not possible with the present staff. One supervisor with a clerk and a peon will form but 5 to 6 per cent on a work costing Rs. 50,000. For departmental work, I would suggest all works costing Rs. 50,000 and above be in charge of one independent section officer directly under the Executive Engineer or under a Senior Subdivisional officer with full powers. Full grant must be given for all works of Rs. 50,000 and under to be spent within one year. It is defeating quick execution if a grant is spread over years.

2. The next approach to departmental work is the piece-work system with K-2 form of agreement. Non-Public Works Department people have vague ideas of this contract system. They take it that all that is required is to get a contractor, get his signature to the agreement and hand over the plans and details of estimate to him and wait for the buildings to come up. It is not so. The fact is the Public Works Department officers are practically the Engineers of these piece-workers doing everything for them from the marking out, to the making of bills. This system is the cheapest but heavily delayed in practice and consequently contradicting its cheapness. It is possible of improvement. The following are lines of improvement:—

(1) *Piece-workers*.—These are generally lacking commercial instinct and capital. The former can be improved by extending the system of bonus by the progress and the latter by helping them with an advance of one-tenth of the net estimated amount at 5 per cent interest and recovering it in ten instalments, taking sufficient security.

(2) *Plans, designs and purchases*.—The Consulting Architect's work in buildings under 2 lakhs of rupees may end with the preparation of plans. His inspections may be reserved for important buildings. The section officer and subdivisional officer may be empowered to make small structural deviations not affecting the elevation for reasons recorded in the order book. The Executive Engineer may be empowered to alter even the elevations for accelerating quicker executions. If these suggestions are not accepted heavy delays will occur until all Public Works staff transform themselves into architects as well. One Consulting Architect cannot be expected to give instructions with reference to works all over the Presidency. So it is better to reduce the number of buildings requiring his inspection.

(3) The K-1 contract does not attract people. It retains all the disadvantages of the K-2 along with the several additional disadvantages of being dragged into court. While the time limit is intended to quicken work any necessary extension in time on either side may be a bone of contention and take us into litigation defeating the purpose of the clause.

(4) Lump sum contracts are full of mischief at the present stage.

Instead of Government having the control of an organized establishment, with experience and technical knowledge, the method of lump sum contracts will involve—if it should be a success—the coming into existence of a more costly staff probably with less experience and knowledge for which Government will have to pay indirectly. A really useful suggestion will be to offer works to tenderers who are Engineers or retired Government Engineers or Supervisors with one-tenth of the estimate amount as an easy loan. Certain latitude must be given in the beginning. In fact a new profession has to be created as it is for doctors and lawyers. The State will be profited to the extent of independent men coming up. But the tax-payer loses, as, what the establishment could save, the Engineer contractor pockets.

I again revert to the K-2 system. Till contract becomes part of an Engineer's profession, the present K-2 system will be the best and cheapest. There exist little delays as rules now stand and these are—

- (1) Public Works Stores and
- (2) Public Works Workshops.

The Stores happen to be a fifth wheel in the coach often with a rack too. This can easily be made subservient to the shops and need cater only to shops. Executive Engineers should be given full powers to purchase all stores direct and similarly to

make all their iron and brass articles locally. In fact I want the stores and shops to help the divisions when wanted and not to check them for being too quick and active. Usually comparisons are made between lay departments and private people completing their works quickly while the Public Works Department drags on. A little observation finds how it is so. The private man is not checked if he pays ten times the rate for a minor item for the sake of quick work. He does not swear at a bad brick, or a continuous joist, nor does he care if the voussoir brick in an arch is a bit badly bedded or the stress on the bottom of a particular pier is over 4 tons. What he wants is a building neat and satisfying his material requirements quickly finished. His plan consists merely of usual materials, usual cornices, usual joints ordinarily in vogue at the locality and his masons do not pretend to be confused over the pattern of work from the men he employs and feels happy he has only himself to satisfy. The Public Works Department man has an architect's plan to translate with local men and materials satisfying the canons of art (Engineering), accounts and architecture. I do not for a moment suggest the slackness adopted by private men being copied by Public Works Department. Any mistake by a private individual builder does not bury his reputation as it does the Engineer's. The Engineer has to work for others, of different views.

Thus, he is in the unenviable position of a servant of all while even in the matter of satisfying the resident the private gentleman is his own master.

(II) Cost of works.

I submit the Public Works Department buildings are cheaper constructed, for the substance of the work, than other buildings. The method conducive to cheapness is again the K-2 system. A further advance is necessary in making it cheaper and that will be by purchasing all materials for the work excluding cement which can be kept for six months, lime for a week's use and inclusive of even paint and oils before the basement is reached. This pays as well.

While at this I submit my repudiation of other departments carrying out works cheaper than Public Works Department. Our accounts are very minute and sometimes needlessly strict. I believe the Public Works Department cost will be the same as that of municipalities and district boards. The contractors of Public Works Department and municipality and district boards will be getting only 7 to 8 per cent profit on their buildings. It is possible the road repairs may help the board and municipal men to offer to do the buildings at a slightly lower rate. But that is more an exceptional case than the usual one.

(III) Speed of Execution.

I cannot treat this item apart from the other two. A quick work is the best of systems and cheapest on the whole. Conversely want of system and delay cause heavy expenditure. The K-2 with the suggestions made is bound to be the cheapest and quickest. Delays are usually caused by—

- (1) Want of a programme.
- (2) Not purchasing all materials in advance.
- (3) Alterations of designs in the course of work by
 - (a) the future tenant's requisitions,
 - (b) different officers' difference in views,
 - (c) the architectural aspect requiring inspection by the Consulting Architect, and
- (4) Want of proper expedition on the part of the piece-worker.

The first can be mended and for the second, rules may be framed out not to cry down an officer for getting his full materials in advance. Under the third (a) must be overcome by ignoring such requisitions even at the cost of being considered "boorish" (b) by decentralising powers to the Executive Engineer and Subdivisional Officers and Supervisors as pointed out above and (c) by limiting the Consulting Architect's activities to buildings costing over 2 lakhs.

(IV) Revised Estimate.

In the present state of things the revised estimate is as much an unwelcome thing as the revised budget for the financier and appeals and Appellate Courts for the lawyers and litigants. The word estimate is limited by time and circumstances.

Any change or alteration in the state of things to those at the time of preparation adds to the causes of the coming in of the revised estimate. To add to this there is one quality next to Ego in man and that is "he thinks he is a bit of an Engineer". So any officer who has anything to do with a building in progress thinks he has a right to show his engineering knowledge by suggesting some alteration or other. Here is a tug. If the subordinate remonstrates the officer says he will apply in writing for the alteration he wants and requests the very small obligation of stopping the work in that portion till orders are received on the suggestion. But each portion is dependant on the other. The effect is, work stops. As a middle course the subordinates have been partly following the suggestions and partly holding and so forth. This is the first and foremost reason for revision.

(2) A very small percentage is due to bad estimating which is now becoming more scarce.

(3) But the recent repeated revisions have been mostly due to world wide economic changes.

There is a possible way of avoiding revision and that is by admitting the necessity for the revision. The sanctioning authority may be empowered to give a so-called 'Co-efficient' to the amount sanctioned which must be kept confidential and must never go below the personal knowledge of the Executive Engineers.

This co-efficient may vary from 1 to 1-20.

8. Extract from the Report of the Bengal Retrenchment Committee.

338. The Public Services Commission in their report on the Public Works Department said:—'We think it should be laid down that the Public Works Department should confine itself to work which cannot be discharged either by private enterprise or through the agency of district boards and municipalities with the necessary financial support from Government.' We are in complete agreement with this view, which was elaborated at a later date by the Public Works Department Reorganization Committee, and we recommend that it be given effect in the manner and to the extent indicated by us.

339. We consider that all new original building works of an estimated cost of over Rs. 50,000 should be constructed under the supervision of an architect assisted by qualified clerks of works. The architect should inspect the works regularly and be responsible for them. A small nucleus of clerks of works, such as assistant engineers, on a semi-permanent but non-pensionable basis would be required, the remainder being engaged on a purely temporary footing for individual works as occasion arose.

340. To enable this proposal to work in practice it would be necessary to abandon the elaborate system of accounts and checks which the Public Works Code and the Public Work Accounts Code prescribe. We suggest that the following outline of the work would give a suitable simplified procedure:—

- (i) Work of architect:—
 - (a) Preparation of designs.
 - (b) Inspection of works.
- (ii) Work of departmental engineers.—
 - (a) Preparation of estimates and of budget demands for work and establishment.
 - (b) Placing of contracts for each work with full authority to accept tenders, provided they are covered by the sanctioned estimate.
 - (c) Power to pay bills for work done on a percentage of the total quality of each class of work shown in the estimate, and without the preparation of detailed measurements.
 - (d) Authority to exceed allotments, provided the excess could be met by re-appropriation from another work under the same departmental head of the budget.

341. Original building works estimated to cost Rs. 50,000 or less should be constructed by heads of departments, the technical advice and supervision in the *mufassal* being given by the District Engineer. The original plans would be passed by the Public Works Department, which would also be responsible for the final

supervision. It would be necessary to remunerate district boards for the services of their engineering staff for this purpose and we suggest that while 15 per cent should be the maximum, 10 per cent of the estimated cost would normally be a suitable amount.

9. *Extract from the Report of the Inchcape Committee.*

We further consider that substantial economies could be effected by recourse to a system of calling for tenders and giving out agency work on inclusive contracts wherever feasible. In paragraph 26 of the Report of the Public Works Department Re-organization Committee, 1917, it was recommended that 'the policy of Government should be directed to the encouragement of the growth of the class of regular contractors and contracting firms in India by inviting tenders for complete works and by the introduction of a system of lump sum contracts.' We are informed that the department has this principle always in mind, but the occasions on which effect has been given to it appear in practice to have been very limited.

ANNEXURE B.

Mr. Ranganayakulu Nayudu's scheme.

A method can be devised by which Government can dispense with the construction of small buildings such as Sub-Registrar's Office, Overseer's Office, Deputy Inspector's Office, Elementary School buildings, a large number of residential buildings, etc.

A plan may be prepared showing the accommodation required together with all essentials, such as verandahs. This may be roughly estimated. Tenders may be called for for constructing the building with the stipulation that Government will pay only the rent of the building for a term of years while the building will be in possession of the owner. The rent of the building may be fixed at about $7\frac{1}{2}$ per cent of the cost of constructing the building as estimated by Government and this will be fixed for a number of years, say 50 in the first instance. Government will have the option of purchasing the building at the end of the term at its market rate for the time being.

To enable the contractor or lessee to construct the building, Government can give an advance not exceeding 75 per cent of the value of the building as estimated by Government Officers. The advance will have to be repaid by the contractor in suitable instalments with interest at 6 per cent.

When the building is completed, the Government Office for which it is intended will move into the building.

The contractor will use his own materials and construct the building according to his own methods. What the Public Works Department has to certify is that it is built according to the plan, rather it is built in such a way as to provide for the accommodation which the administrative department wanted and that it is suitable for the purpose. The Government need not concern itself as to what materials are used, provided they are suitable. Taking an example, if the contractor uses brick in mud instead of brick in mortar, Government need not object, provided it serves the purpose. Similarly if he used country wood instead of teak, Government need not object provided the former is strong enough and structurally sound. Similarly if the floor is of cement concrete instead of Cuddapah slabs, Government need not object. The object to be aimed at is to see that the accommodation wanted is obtained in the new building and that it is structurally sound.

This arrangement will save a large amount of money from being invested in public buildings. The money so saved may be utilized for other public buildings such as hospitals, court-houses, etc.

Such a policy may be pursued by Government in the case of several minor works (works costing less than Rs. 10,000) though there is reason to expect as time goes on, that this system can be tried even for the construction of major works.

All land required should be purchased by Government whenever found necessary.

ANNEXURE C.

Report of Mr. Hawkins' Committee on delegation of powers.
NOTES.

In connexion with the powers of technical sanction we consider that the delegation of these powers as regards detailed estimates should be combined with acceptance of the principle of centralization, as far as possible, of important structural design. We suggest that a central designing office, such as the office of the Chief Engineer, having at its disposal in its recorded plans and technical information the accumulated professional experience of the department, and in its library the latest professional information from outside, is in a better position to deal with important structural design rapidly and economically than offices in the districts. Moreover we suggest that specially selected designing and drawing office staff working under the general control of the Chief Engineer have a better chance of specializing in their particular branches of design and acquiring the facility and speed of work which can be obtained only by specialization and which is an important factor in economy of staff, than district staff whose work is of a more general nature and who have not the opportunity for similar specialization. An example is the design of steel structural work such as an important bridge. We suggest that the records of the Chief Engineer's office would probably include design already prepared from which a suitable design for any particular case could be selected at once or adopted, whereas the delegation of this work to a local office usually involves the preparation of an entirely new design in detail which we suggest is uneconomical both as regards cost of staff and time.

We further suggest that the delegation of responsibility for the structural stability of a design to an office subordinate to the office of origin is unsound in principle. At present, responsibility for the technical features of a design depends upon the power of technical sanction irrespective of the office of origin of the design. This involves, in effect, technical scrutiny of a design issued by the Chief Engineer by an officer subordinate to him. We find that this operates as a considerable handicap in the delegation of powers of technical sanction, and we suggest that it is also uneconomical in regard to the cost of establishment.

We consider that the classification of structural designs as regards relative technical importance on the basis of cost is unsound. The design of a steel bridge costing half a lakh may present more technical difficulties than that of a number of works included in a single project costing six times the amount. The adoption of the general principles now advocated would enable the Chief Engineers and Superintending Engineers to distribute work on the basis of real technical responsibility and would thus facilitate decentralization on safe and economical lines.

The same principles apply to the distribution of work between the Superintending Engineers' and Executive Engineers' offices.

We therefore recommend that important structural designs be prepared so far as possible in the Chief Engineer's office, together with schedules of quantities; that the remaining designing work of importance be concentrated in Superintending Engineers' offices, the Executive offices being left to deal only with designs for alterations of existing buildings and the less important new works. We further recommend that responsibility for the technical features of the design shall lie with the office of origin even though the powers of technical sanction of the estimate be delegated to a subordinate officer.

Foundations and similar features which must be settled locally will of course be left to local officers who will be responsible for them.

We consider that this differentiation between technical responsibility for a design and responsibility for local feature and the estimate is essential if further powers of technical sanction are to be delegated, and we have accordingly based our recommendations on this principle.

2. We recommend that limits of technical sanction (buildings and roads) shall be applied to the several units of a project involving a number of buildings and not to the whole project, provided that the general lay-out, drainage and other general features of the project shall be treated as a whole and not divided into separate units.

3. *Excess over sanctioned estimates.*—The Public Works Department Code allows an excess of 10 per cent over the amount administratively approved (Code paragraph 181), whereas the Superintending Engineers and Executive Engineers have respectively powers to exceed estimates technically sanctioned by 5 per cent or Rs. 500 and 5 per cent respectively (Code paragraphs 459-B and 464-B). We have in our recommendations dealt with excesses over estimates solely with reference to the amount administratively approved subject to limitation of the Executive Engineer's power to exceed the technical sanction, and in doing so we have proposed to waive altogether the existing power to exceed the administrative sanction. Our reasons are as follows:—

We consider that apart from special and unavoidable causes such as the abnormal rise of market rates in recent years, the causes of excesses over sanctioned estimates are

(a) Additions to the administrative requirements made by departments concerned after a project has been sanctioned.

(b) The practice of 'tight' estimating.

Excesses resulting from the former cause are not really excesses over the estimate, though, owing to the fact that they are customarily dealt with by revision of the estimate they appear to the administrative authorities as excesses. We strongly recommend that the practice of providing for excesses due to alterations of the administrative requirements by revision of the sanctioned estimate be absolutely prohibited, as the procedure necessarily misleads and embarrasses the administrative and financial authorities. They should be provided for in supplementary estimates, following the normal procedure as regards administrative sanction.

The second cause, 'tight' estimating, is a very necessary practice if the cost of public works is to be kept down, but we consider that it has proved misleading because the detailed or working estimate has hitherto been considered as the ultimate financial liability. The sanctioned detailed estimate is in theory assumed to be confidential, but in practice it is impossible to keep it confidential, and provision in rates or otherwise for possible unavoidable excesses undoubtedly tends to increase the ultimate cost of work. An analogy may be found in the system adopted by a contractor who undertakes large works on the contract system. This refers to contracts for completed works. He first makes out his own working estimate which is fairly tight and represents what he hopes to be able to do the work for. He then makes out a second estimate which provides for all possible unforeseen contingencies and for his profits, and which forms the basis of his tender. The working estimate constitutes the standard to which he expects his staff to endeavour to work and by which he checks his costs in detail, but in practice the contractor's own working estimate is frequently exceeded. In the Public Works Department Government are in effect their own contractors and the 'contractor's profit' goes into the pocket of the tax-payer but the necessity for a 'tight' working estimate as a standard to endeavour to work to still exists. It is however necessary for the administrative and financial authorities to know the ultimate possible financial liability for a project. We therefore recommend that the amount of the administrative sanction be treated as the 'tender' or ultimate possible financial liability and that the practice of 'tight' estimating in the detailed or working estimate be encouraged.

3. (a) Our reason for introducing the limit of Rs. 250 in the Executive Engineers' powers is to avoid the necessity to prepare revised estimates to cover excesses on small works.

4. *Repairs.*—We recommend that the definitions of the several classes of repairs, which are at present, somewhat indeterminate and confusing, be definitely framed as follows:—

(a) Ordinary repairs to include all repairs of a nature which do not increase the capital value of the buildings.

(b) Special repairs to include all repairs which increase the capital value of the building, e.g., replacing a worn out plaster floor with tiles.

The term 'annual repairs' to be abolished. It merely complicates the powers of sanction.

'Extensions and improvements' will then include only such works as will increase or improve the accommodation.

5. *C. Lump sum estimates.*—We find that the procedure prescribed in Code paragraph 233, and G.O. No. 1054 W., dated 14th August 1919, paragraph 2 is generally imperfectly understood and the delegation intended is therefore not effective. The procedure may be clearly summarised as follows:—

For each building—either ordinary or residential—the repairs of which will on the average of five years not ordinarily exceed Rs. 1,000, the Executive Engineer should fix a limit for annual expenditure on repairs, based on the estimated average and not exceeding Rs. 1,000. After this has been sanctioned by the Superintending Engineer, or by the Executive Engineer, if it does not exceed Rs. 500, the Executive Engineer may execute repairs each year to an amount such that the average of the year and the four preceding years will not exceed this limit. In such cases the 2 per cent limit specified in G.O. No. 1054 W., dated 14th August 1919, will not operate.

The 2 per cent limit is to be applied only in cases in which the above procedure cannot be applied.

In the case of residential buildings, the permissible average is further limited to the amount provided for repairs in the rent data statement.

6. We would note, with reference to our recommendation to enhance the powers of Executive Engineers to accept tenders, that the reason for our proposal to limit these enhanced powers to piece work agreements only is the fact that these agreements bind Government to nothing more than payment for work actually executed and may be determined at any time, whereas a contract binds Government for the whole of a work or a fixed total expenditure.

7. *Stores and Workshops.*—In connexion with the powers to purchase stores and tools and plant, we strongly recommend in the interest of economy some extension of the functions of the Public Work Stores as a central purchasing agency. We consider that the stores should maintain close touch with the possibilities of the market in India generally, as regards prices and available supplies and should be in a position to know where any plant or supplies required can be obtained at the lowest rates. It is impossible for local officers to do this.

8. *Disposal of surplus and worn out stores and tools and plant.*—We consider that the existing rules on this subject are vague and incomplete and that this results in much waste of time. By G.O. No. 1054 W., dated 14th August 1919, Executive Engineers were invested with full Code powers under Code paragraphs 467 (b) (i) and (ii), 467 (c) (i), (ii) and (iii). As generally interpreted these powers do not include power to write off tools and plant and stores or materials which are worn out and useless or surplus. Even in cases when tools or stores can be sold in auction, it is stated, by members of the Committee, that the Accountant-General does not accept disposal by sale by auction as a valid disposal at 'part value' under 467 (b) (ii) or (c) (i). In consequence of this, a mass of applications for sanction to write off petty items come up to Superintending Engineers, which causes unnecessary correspondence and waste of time. We consider that these rules require explanation and liberalizing and recommend that power under 467 (b) (iii) be delegated to the Executive Engineers and the Code paragraphs 467 (b) (ii) and (iii) and (c) (iii) be definitely stated to authorize sale by auction or the write off of worn out or unserviceable tools, materials or stores up to the limits stated. We also consider that some power under 467 (b) (i) and (c) (i) may be delegated to Subdivisional Officers.

9. *Petty works and repairs for other departments costing less than Rs. 5,000.*—We find that the relief intended to be secured to the Public Works Department by the orders embodied in G.O. No. 440 W. of 1918, relating to the execution of such works by the departments concerned is not in practice effective, the reason being that in many cases the civil department concerned find real difficulty in getting the works done and in effectively controlling them during execution—as a result they call upon the Public Works Department for assistance which cannot fairly be denied to them. We fail to see how such assistance can reasonably be withheld, but we would suggest measures to facilitate the execution of petty works.

(a) Public Works Department Code paragraphs 188 and 190.

Form No. 8-A which is form No. 32—'Petty works requisition and account' in the book of forms first edition, 1919, is not in use in this Presidency. We would recommend its immediate introduction, together with the procedure laid down in the paragraphs quoted above. The Civil Officer would then make his requisition in this form. In the case of works costing less than Rs. 1,000 the Subdivisional Officer would note his rough estimate in the form and on its acceptance by the Civil Officers concerned would proceed to execute the work. Should the work exceed Rs. 1,000 an estimate would be prepared in the ordinary course. In making this requisition the Civil Officer should add his certificate that funds will be provided from the grant at his disposal if funds are not available in the Public Works Department. When the work is completed, the Public Works Department officer in charge who will usually be the Subdivisional Officer will prepare and certify the bill and pass it on to the Civil Officer concerned for payment. It is essential that there should be a record of such works executed for other departments and the record should be in the simplest form possible. On the completion of any work of the kind, the Subdivisional Officer should send to the Division office a slip, on which is entered *name of department, building, brief description of work, i.e., "Repairs" or "Construction" and Cost.* These will be compiled and submitted as an annual statement with the March accounts in each year, as "Works executed from funds provided by other departments".

10. Under G.O. No. 1374 W., dated 15th December 1916, works costing up to Rs. 200 may be executed without a formal piece work agreement. We propose with a view to the expedition and simplification of works that a simple form of 'Work' order be introduced on which for works of a simple nature costing not more than Rs. 1,000 an order to a piece-worker or supplier to execute the work can be made. The "Work Order" form should be in duplicate, and signed by the officer giving the order, who would usually be the Subdivisional Officer, and the piece-worker. The form may also be used for the supply of materials. The combination of the procedure with that detailed in paragraph 11 would result in a Subdivisional Officer being able to put work on hand practically immediately after the requisition is received. This would apply to both Buildings and Roads and Irrigation works.

11. *Code paragraphs 233 and 325, Rule II (b).*—We suggest that the power to sanction remission of rent in the circumstances referred to in these paragraphs for periods not exceeding one month be delegated to the Superintending Engineer in consultation with the local head of the department concerned, and under Rule II (b) for periods not exceeding one week to the Executive Engineer.

12. *Code paragraph 26.*—We recommend that power to make temporary appointments to clerical establishment in leave vacancies not exceeding two months be definitely delegated to Executive Engineers and that this delegation should also apply in similar circumstances to temporary Lower Subordinate Draftsmen.

13. The two members of the Committee represent that as Executive Engineers they find their control of clerical staff with a view to exacting satisfactory work (which seriously effects economy of establishment) handicapped by their lack of power to award punishment. They suggest that the awarding of three black marks within one year should result automatically in the suspension of the clerk's next increment until the Executive Engineer under whom he is serving reports that the improvement in his work justifies his reinstatement.

14. We propose that Executive Engineers be empowered to grant leave to subordinates other than the Subdivisional Officers up to a maximum of one month provided that no substitute is required. In such cases the leave should be reported at once to the Superintending Engineer.

15. *Transfer reports of Subdivisional Officers.*—We consider that the Executive Engineer is responsible for seeing that the transfer is in order and for reporting to the Superintending Engineers any points on which orders are required and that transfer reports may be dealt with finally by the Executive Engineer instead of being sent to the Superintending Engineer.

16. *Stationery and Forms Indent for divisions.*—We consider that these may be sent to the Superintendent of Stationery direct by the Executive Engineers.

17. *Collection of rents.*—We find that the present system of collecting rents for residences involves a large amount of circumlocution and unnecessary correspondence. At present the collections all pass through the Divisional accounts and the Executive Engineers are responsible for the collection of arrears. We consider that the procedure will be greatly simplified if rent collection is left to the local treasury officer in consultation with the local head of the department to which the tenant belongs, for the reason that these two officers are in a better position to keep in close touch with the movements of the officer and change of tenancy than the Executive Engineer. We propose that the following procedure be followed:—

(a) The Executive Engineer to furnish every six months a statement in form 44-B showing the register number and name of the building, tenant, and maximum rent assessed or special rent sanctioned where such sanction has been given. This statement to be communicated to the local treasury officer, copy to the Accountant-General, and extracts to the local heads of departments concerned. Changes in this list, such as the addition of new buildings or alteration of the rent assessment, to be communicated as above whenever they occur in the form of a correction slip. The local treasury officer to be responsible for the collection of rents and arrears from the salary bills, and to correspond in connexion with these matters with the local heads of departments direct.

Applications for reduction or remission of rent to be dealt with as at present.

Cessions or alterations of tenancy to be communicated by the local heads of departments to the local treasury officer and copy to Executive Engineer for information. Rent collection to be credited through the local treasury accounts and not passed into the Public Works Department Division accounts at all. The necessary revenue figures for budget purposes can be communicated by the Accountant-General to Government direct. We consider that the adoption of this procedure will eliminate a very large amount of unnecessary correspondence and delay and tend to economy of staff and stationery and avoid the double accounting which is at present done.

18. *Budget.*—There are points in connexion with the existing budget procedure which we think may be referred to in the report of the Committee, as they affect indirectly the various powers and control of works.

It is a fundamental rule that expenditure on new works cannot be incurred until funds are definitely appropriated, i.e., until the final issue of the budget is received. The Irrigation Budget for the current year was received in Circle offices at the end of May and the Buildings and Roads Budget about the middle of June. This means that new works cannot be started until some time later, as even though preliminary arrangements are already made, these are limited to such action as will not commit Government to any liabilities.

Thus by the time works are started, the best working season is over and such an ideal as proportional monthly expenditure is impossible of realization. Moreover, if the budget provision is based on a year's programme of work surrenders or lapses become unavoidable.

It is not within the scope of this Committee to deal with the question of budget procedure, but we would suggest that the fact that new works will not be in effective progress until after the monsoon in each year should be recognized.

We would also bring to notice that on view of the raising of the limit of minor works to Rs. 10,000 and the consequent increase of designing and estimating under the head it is very desirable that the civil departments concerned shall communicate their requirements for minor works at an earlier date than is at present usual.

19. We consider that simplification of audit control is very necessary, with a view to reduce the very considerable amount of correspondence about petty items which at present takes place.

While it is not desirable in any degree to relax financial and audit controls a great amount of valuable time is at present spent in dealing with audit objections in connexion with minor matters which are of little or no real importance, which could usefully be spent on control on broader lines which would result in real economy.

20. *Irrigation.*—In the case of Roads and Buildings Works, the distinction between administrative approval and technical sanction has been clearly defined in Public Works Department Code, paragraphs 178-181, and this has greatly simplified the definition of the powers of sanction. The two classes of sanction have never been so clearly specified and recognized in the case of Irrigation works, and the powers of sanction are consequently less clearly defined. We recommend that the two stages of sanction be clearly recognized in regard to Irrigation works and we have dealt with the powers of sanction on the basis of the two distinct sanctions.

In the case of Irrigation works, the authority according administrative sanction frequently has to deal with some of the technical issues involved, but this is a matter in which the sanctioning authority is free to use his discretion. The distinction between ordinary repairs, special repairs and extensions and improvements is far from clear, and we think the resulting complications tend to make the rules for sanction unnecessarily involved, and occasionally inconsistent.

Applying the same principles which underly the proposed definition of repairs under 'Roads and Buildings' (note 4), we would propose the following definition of repairs of Irrigation works of all classes:—

(a) *Ordinary repairs.*—To include all repairs which restore or maintain the original standard of efficiency of the work without resulting in an extended scope of action.

(b) *Special repairs.*—To include all repairs, which, while not extending the effective scope of action of the work, yet involves increase of efficiency as compared with the original design.

(c) *'Extensions and improvements'* will then include all works which result in additions to the work or in the extension of the effective scope of action of the work.

We have based our recommendations for the simplification of the powers of sanction for Irrigation works on the assumption that the foregoing general principles will be approved.

As an example of the confusion apparently resulting from want of clear definition of the two classes of sanction we would point to the fact that under ordinary Irrigation works, the Executive Engineer has powers of *technical* sanction up to Rs. 2,500—G.O. No. 1054 W., dated 14th August 1919—while for Contribution works he has powers only up to Rs. 500—G.O. No. 454 I., dated 5th November 1917.

21. Under existing rules (Works Audit Manual, paragraph 145) individual sub-works of a scheme estimate (Irrigation and Buildings and Roads) require piecework agreements irrespective of the value of the individual works. We recommend that the procedure suggested in paragraph 10 above shall apply also to individual sub-works of a scheme estimate.

We also recommend that the limit for execution of a work under a 'Work order' shall apply to the amount of work actually to be executed by the pieceworker exclusive of the value of any materials supplied by Government (see Manual of the Work Audit Department, vol. I, paragraph 145, note 2).

ENCLOSURES

List of returns which are considered unnecessary.

Report of progress of works for investigation of Irrigation projects.

2. Returns showing all repair estimates sanctioned by the Executive Engineer under the enhanced powers.

3. *River diagrams.*—(At present duplicate copies of all diagrams are sent, one copy for record in the Superintending Engineer's office, and another to Chief Engineer's office). There is no need to have copies of the diagrams in the Superintending Engineer's office. For every small information in connexion therewith reference is made only to the Executive Engineers. Only one copy of each diagram was being sent to Superintending Engineer's office for transmission to Chief Engineer's office till four or five years back.

4. Quarterly statement showing the progress made in the preparation of plans and estimates for police buildings. This return is unnecessary. The Superintending Engineer may send, if necessary, in consultation with other departments, a list of urgent works for which plans and estimates are required every year.

5. Annual statement showing progress of expenditure on works carried out by the Public Works Department on behalf of the District Board.

6. Duplicate copies of abstract estimates, data sheets, report of all estimates submitted to the Superintending Engineer for sanction.

7. Report on the condition of roof timbers of buildings. The Executive Engineer can look to this and, if necessary, a certificate of examination may be sent to the Superintending Engineer.

8. Half-yearly list of surplus stores.

9. Quarterly list of iron works contract.

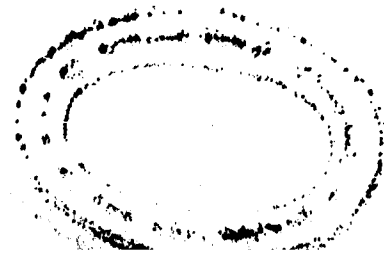
10. List of works check-measured by the Executive Engineer and Assistant Engineers which are now sent once in a quarter.

11. Certificate of examination of register of works monthly.

12. Quarterly certificate of check of stationery.

This may be dispensed with in view of the annual verification certificate which is being furnished at the time of annual indent.

N. SWAMINATHA AYYAR.



Comparative statement showing the delegation of powers as existing and as proposed, of the different officers of the Public Works Department.

Number and nature of sanction.	Remarks.	Powers of the Superintending Engineer.		Powers of the Executive Engineer.	
		As existing.	As proposed.	As existing.	As proposed.
I. Original works.					
(a) Technical sanction to estimates	Subject to the principles suggested in note 1 being accepted. See notes 3 and 3 (a).	Rs. 50,000—G.O. No. 397 W., dated 25th March 1919. Up to 5 per cent or Rs. 500—Code 469 B.	Rs. 1,00,000 Limited to the total amount administratively sanctioned.	Rs. 2,500—Code 484 (a); G.O. No. 1054 W., dated 14th August 1919. Up to 5 per cent of estimate, Code 484 (b).	Rs. 10,000. Up to 5 per cent or Rs. 250 over the technical sanction which ever is greater limited to power of technical sanction and to the total amount of the administrative sanction. Rs. 10,000.
II. Repairs.					
(a) To sanction ordinary repair estimates within budget allotments under each head of service.	See note 4	Without limit—Code No. 460 (a).	Without limit	Rs. 2,500—Code 465 (a)	Do.
(b) To sanction special repair estimates within budget allotments under each head of service.	Do.	Do.	Do.	Do.	Do.
(c) To prescribe lump sum amounts for ordinary repairs to buildings.	See note 5 (Administrative).	Rs. 1,000—Code 460 (a) and 238.	No change	Nil.	Rs. 500 subject to note 5.
III. Contracts.					
1. To accept tenders for original works and repairs.	See note 6	Within estimate amount plus 5 per cent—Code 461.	Within estimate amount plus 5 per cent.	Rs. 25,000—G.O. No. 1382 W., dated 7th September 1920; G.O. No. 996 W., dated 18th July 1921.	Additional powers up to Rs. 50,000 for piece-work agreements only—see note 6.
(a) To sanction purchase of office furniture ..	....	Rs. 500—G.O. No. 79 W., dated 19th January 1912. Within budget allotment—Code 462 (a) vi.	Rs. 500	Rs. 500—Code 467 (a) ii ..	Rs. 50.
(b) To sanction estimates for repairs to tools and plant.	....	Without limit—Code 462 (b).	Within budget allotment	Rs. 500 for each estimate for repairs of special tools and Plant and also up to Rs. 1,000 for the ordinary maintenance of tools and Plant in a division for the year.	Rs. 500 for each estimate for repairs of special tools and Plant and also up to Rs. 1,000 for the ordinary maintenance of tools and Plant in a division for the year.
(c) To issue orders for the disposal of all unserviceable or surplus stores, including stock, tools and plant, materials at site of works and materials received from works dismantled, etc.	See note 8	Without limit—Code 462 (b).	Without limit	Rs. 2,500 in the case of surplus stores and materials only—G.O. No. 1054 W., dated 14th August 1919.	Rs. 2,500 subject to note 8.
(d) To sanction the writing off of tools and plant the full value of which has been recovered.	Do.	Do.	Do.	Without limit—Code 467 (b) i ..	No change.

Comparative statement showing the delegation of powers as existing and as proposed, of the different officers of the Public Works Department—cont.

Number and nature of sanction.	Remarks.	Powers of the Superintending Engineer.		Powers of the Executive Engineer.	
		As existing.	As proposed.	As existing.	As proposed.
IV. Stores—cont.					
(e) To write off tools and plant in cases where only part values have been recovered.	See note 8	Without limit—Code 462 (b).	Without limit	Without limit 467 (b) ii—G.O. No. 1064 W., dated 14th August 1919.	No change.
(f) To write off the irrecoverable value of stores lost by fraud or negligence of individuals or other causes.	Do.	Ra. 1,000—if authorized 482 (d), 300, G.O. No. 597 F., dated 1st July 1920.	Ra. 1,000—if authorized, 300	Ra. 1,000—if authorized 467 (b) iii.	Do.
(g) To sanction the sale of unserviceable stores at less than their book value.	Do.	Without limit—Code 462 (b).	Without limit	Ra. 2,500—467 (c) iii	Do.
V. Miscellaneous powers.					
To sanction advances of travelling allowances to subordinates on tour.	....	Code 104	Proposed that the powers in Code paragraph 104 (1) be extended to permit the Superintending Engineer to sanction a similar advance to any officer under him who travels beyond the officer's jurisdiction even though not accompanying the Superintending Engineer.	Code 104	Do.
VI. Administrative approval.					
(a) Public Works Department buildings other than residential buildings and electrical works, etc.	See note 3	Ra. 5,000—G.O. No. 1638 W., dated 22nd October 1920; Code 432-I (1).	Ra. 5,000	Ra. 500—G.O. No. 378 W., dated 12th March 1917.	Ra. 500.
(b) Residential	Do. .. ..	....	....	....	....
(c) Ecclesiastical	Do.	Ra. 1,000—G.O. No. 40 W., dated 8th January 1920, and Memo. No. 1571 C., dated 26th February 1920.	....	....	....
(d) Electrical works	Do.	Code 280	Ra. 1,000 .. ..	....	....
(e) Contribution works	Do.	Code 280	Code 280 .. ..	....	....
Irrigation.					
Technical sanction—					
(a) Technical sanction of estimates under all original heads and extensions and improvements, including Tank Restoration Scheme, etc.	See note 20	Ra. 50,000—G.O. No. 397 W., dated 26th March 1919, and Memo. No. 6735 C., dated 18th October 1919.	Ra. 50,000	Ra. 2,500—464 (c), G.O. No. 1064 W., dated 14th August 1919.	Ra. 5,000.
(b) Technical sanction of contribution works.	Do.	Ra. 50,000—Memo. No. 1—G., dated 3rd January 1920.	Ra. 50,000	Ra. 500—G.O. No. 454 I., dated 5th November 1917.	Ra. 5,000.

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(c) To sanction ordinary repair estimates within budget allotments, including tank restoration scheme ordinary repairs.		Without limit—Code 460 (e), Ra. 50,000 for tank restoration scheme.	Without limit	Ra. 2,500—No. 466-2 and G.O. No. 1064 W., dated 14th August 1919.	Ra. 10,000.
(d) To sanction Special Repair estimates within budget allotments, including tank restoration scheme works.	....	Without limit—Code 460 (e).	Do.	Do.	Ra. 5,000.
(e) To accept tenders for works and repairs ..	See note 6	Within estimate plus 5 per cent—Code 461.	Within estimate plus 5 per cent.	Ra. 25,000—Code 466	Additional powers to Ra. 50,000 for piecework agreements only.
<i>Administrative—</i>					
(f) Ordinary repairs	As per technical sanction.	Without limit—Code 460 (e).	Without limit	Ra. 2,500—Code 465 (a)	Ra. 10,000.
(g) To accord administrative approval to contribution works.	....	Ra. 2,500—Memo. No. 1—G., dated 3rd January 1920.	Ra. 5,000	Ra. 500—G.O. No. 454 I., dated 5th November 1917.	Ra. 1,000.
(h) To accord administrative approval to departmental irrigation works, extensions and improvements, original works and special repairs (under irrigation systems 'kept' works).	....	Ra. 1,000—Memo. No. 1006-E., dated 14th October 1921.	Ra. 5,000	Ra. 500—G.O. No. 331 I., dated 21st November 1919.	Ra. 1,000.
(i) To accord administrative approval to tank works and 'not kept'.	....	Ra. 2,500—Memo. No. 1006, dated 14th October 1921.	Ra. 10,000 .. ..	....	Ra. 2,500.
(j) To accord administrative approval to tank restoration scheme ordinary repairs.	....	Ra. 50,000—G.O. No. 397 W., dated 26th March 1919.	Ra. 50,000	Ra. 2,500—G.O. No. 1064 W., dated 14th August 1919.	Ra. 5,000.
(k) To accord administrative approval to tank restoration scheme extensions and improvements and special repairs.	....	Ra. 10,000—Memo. No. 409 G., dated 21st August 1919.	Ra. 10,000	Ra. 500—G.O. No. 331 I., dated 21st November 1919.	Ra. 2,500.
<i>VII. Reappropriation of funds.</i>					
1. 41. Civil Works—Provincial—					
(a) Major .. ..	....	Ra. 5,000 within same head of account—G.O. No. 887 W., dated 26th July 1918 and No. 1487 W., dated 11th October 1921.	Ra. 10,000 .. ..	....	Ra. 2,500 (under same departmental head).
(b) Minor .. ..	....	Within lump sum grants of circle, same departmental head—Memo. No. 1043 B/22-2, dated 22nd July 1922, and G.O. No. 751 W., dated 16th March 1920.	Within lump sum grants of circle, same departmental head.	....	Within lump sum grant of division, same departmental head.
2. Establishment—contingencies		Within grant of circle—Memo. No. 8982 C., dated 26th November 1913.	Within grant of circle.		

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ANNEXURE D.

Audit.

1. The Public Works Reorganization Committee.
2. The Bengal Retrenchment Committee.
3. The Bombay Retrenchment Committee.
4. Mr. Mullings' Committee.
5. Mr. Hawkins' note.

1. *Extract from the Report of the Public Works Department Reorganization Committee.*

67. During our investigation a number of officers of the Public Works Department have stated in evidence that the system of accounts and audit at present in force in the department is unnecessarily complicated, and that their accounts work is so heavy as to interfere seriously with their executive duties. After an examination of the existing procedure we agree that the executive engineer is required to devote too much time to his accounts and we recommend that steps should be taken to relieve him of the work of compilation, leaving him responsible only for the record of the initial transactions, and for the preparation of such statistics as are necessary either for his professional purposes or for the maintenance of adequate control over his expenditure. Our detailed recommendations on this subject will be found in Part I of Appendix B.

Public Works
Department
accounts.

APPENDIX B.

Part I.—Public Works Department accounts.

1. Under the existing system the executive engineer is the officer responsible for the detailed accounting of all expenditure on public works within his jurisdiction. In some provinces he even disburses payments for works executed by his subdivisional officer, while in others the subdivisional officer maintains the primary records of account which are submitted by him to the executive engineer for incorporation in the accounts of the division. The divisional accounts are compiled in the executive engineer's office with the help of an accountant, and are sent to the audit officer by a specified date in the month following that to which they relate. It is laid down that, unless the circumstances are very exceptional, the executive engineer in charge of the division shall always sign the monthly accounts himself after thorough examination of the books and documents from which they have been compiled, but that should the requirements of his work render the presence of the executive engineer at his headquarters when the accounts are due for despatch a matter of inconvenience, they may be signed by the accountant. In such cases the executive engineer, as soon as he can examine the books and papers, forwards a certificate of responsibility to the audit officer, and until this is received the latter cannot finally pass the accounts.

Proposed
simplification
of the Public
Works
Department
accounts
system.

Public Works
Department
Code, Vol. I,
para. 1357.

Public Works
Department
Code, Vol. I,
para. 1359.

This system of accounts has been criticized by the majority of the officers of the Public Works Department who have given evidence before us. It is urged that the time which the executive engineer is required to devote to his accounts work is excessive, and that the monthly compilation interferes seriously with the executive work of the division. Since the amalgamation of the public works accounts with the civil accounts the time allowed for compilation has been reduced, and it is stated that the simplification of procedure has not been commensurate with this reduction of time. It is also urged that the majority of forms submitted with the monthly accounts are of no practical utility to the executive engineer as regards the control of expenditure within his division. We are convinced as a result of our investigation that the executive engineer and his office staff are required at present to devote too much time to the accounts work and that, in the interests of executive efficiency, some measure of relief is

needed. We agree that the divisional officer must be responsible for all disbursements within his division, but we do not consider that he should necessarily be called upon to compile the records of these disbursements in such a form that they can be directly incorporated in the general accounts of the province. This latter duty appears to us to be that of the audit office rather than of the engineer.

* * * * *

5. Our attention has been called to the large proportion of public works expenditure which is held in objection in audit. In the year 1914-15, of a total expenditure in the buildings and roads branch of Rs. 9½ crores, Rs. 3½ crores or 35 per cent were held in objection. The main classes of objections are want of or excess over estimate, want of or excess over appropriation, and miscellaneous irregularities. The majority of cases of want of estimate are due to works, informal approval to which has been obtained, being commenced before the estimate is officially sanctioned and we anticipate that, when enhanced powers are delegated to superintending and executive engineers, and the delay at present necessitated in obtaining superior sanction consequently obviated, there will be a large decrease in the number of such objections. Similarly the adoption of our recommendation that executive engineers should be empowered to reappropriate funds should dispose of most of the objections under excess over appropriations. In regard to miscellaneous irregularities it had been stated by the executive that the percentage is swelled by reason of the fact that objections are raised in audit with reference to items which would have been passed without comment by an accounts officer with any professional knowledge, that expenditure is challenged the necessity for which can only be determined by the executive, and that the compilation of replies entails unnecessary labour on the part of the officers concerned. We realise the necessity for a proper audit, and we therefore refrain from making any detailed recommendation on this point. The comptroller-general informs us that efforts are being made to reduce this class of objection, and that orders have been issued that objectionable item statements shall in every case be scrutinized by a responsible officer. If this scrutiny is properly carried out, and if it is impressed on all officers engaged in audit that objections should only be raised where there is genuine reason to believe that the expenditure was objectionable, and that the raising of unnecessary objections will reflect unfavourably upon the officer responsible, we do not consider that any further action is necessary.

* * * * *

69. The Decentralization Commission recommended that the provisions of the Public Works Department Code should be confined to rulings necessary for general application in the interests of imperial finance and control and that the idea of making it an official *vaie mecum* for engineer and accounts officers throughout India should be abandoned. Many witnesses have represented the difficulties of working caused by the numerous restrictions of this code, but as we understand that it is in process of revision on the lines indicated by the Decentralization Commission, it appears unnecessary for us to make any general recommendation on the subject. Certain specific rules have, however, been brought to our notice in which we consider that modification is desirable, and these are dealt with in Part III of Appendix F.

Audit objections.

2. Extract from the Report of the Bengal Retrenchment Committee.

344. We have been told on good authority that the present mass of routine and accounts work constitutes a serious burden on an Executive Engineer and his staff, to the detriment of the main executive duties of this officer. The evidence shows that the Public Works Department is loaded with an elaborate accounts procedure which all who are conversant with it consider should be simplified. We have been assured that if the accounts works were simplified there could be a material reduction in staff, and greater departmental efficiency. We accept the proposal that has been made to us that a small Committee should investigate the routine and accounts work that the codes now prescribe, in order that all unnecessary work may be eliminated. We recommend that this be done.

3. Extract from the Report of the Bombay Retrenchment Committee.

Practically all the witnesses whom we have examined have agreed that the time of Executive Engineers cannot be devoted to their professional duties to the full extent that would be desirable owing to the excessive amount of routine and account matters with which they are required to deal. It is our opinion that the elaboration of accounts and returns in the Public Works Departments is unduly expensive of the time both of officers and clerical establishment and we would press upon Government the suggestion which we have received from the Chief Engineer that a strong Committee should be appointed in order to revise thoroughly the present methods of procedure and to eliminate unnecessary work. We believe that such a measure should result in a very considerable reduction in clerical establishment in all offices.

4. Extract from Mr. Mullings' Committee's report.

4. *Decisions of Conference.*—Our conclusions are that a more efficient audit implies audit in greater detail and cannot be expected to be less costly than the present arrangement as it infers more work. It was believed that no large defalcations and few small ones have ever been discovered in audit in Madras and no saving can be expected under this head. It was pointed out that the recent introduction of the Indian Service of Engineers, the improved scale for accountants and the general spread of education tend not only to raise the standard of Public Works Department employees but to progressive reduction of both fraud and rule breaking. In the circumstances the Conference unanimously consider that it would be more logical to lighten audit than to make it more detailed. Therefore, while every Engineer welcomes any proposal to reduce his accounts work, so that he may devote more time to engineering, the Conference is of opinion (i) that the present method of audit fails chiefly owing to insistence by the Accounts Department on rigid adherence to unsuitable or unnecessary accounts rules so as to make the work subordinate in importance to the accounts therefor; (ii) and that the lines on which change is most necessary is the simplification of accounts.

5. *Suggestions of Conference.*—It was further pointed out that most initial accounts begin in the section offices (to which most audit objections subsequently go), and that section officers have no accounts training. Section accounts are compiled in the Subdivision office by low-paid clerks who are incapable of training section officers. Innumerable petty audit objections would never arise if section officers had a short accounts training, while better education of subdivision clerks would reduce the need for detailed audit in the Division office. The absence of prospects for a Public Works Department clerk gives the department no chance of selection for its recruits, and better educated men will need higher pay.

6. *Objections to Controller's proposals.*—As regards the Controller's proposal to remove accountants and some accounts clerks from division offices it was pointed out that this branch of the Executive Engineer's office is now the auditing branch, and that the present custom of subsequent reaudit by the Deputy Accountant-General is the very duplication of work which the Controller professes to be anxious to avoid. If some of the divisional accounts clerks are placed under the Deputy Accountant-General's control, the audit department can feel safe against departmental manipulation of accounts, and the Executive Engineer will not be separated from various records

to which he has daily to refer. The proposed compilation of accounts in a separate office is also objectionable because it continues to duplicate certain work (see paragraph 11, page 11 of the Controller's typed note). Again, if the accountant is removed from the Divisional office, the Executive Engineer simultaneously loses the manager of his office, the only man in it capable of drafting a reply to urgent references received while the Executive Engineer is on tour. The present divisional head clerk is merely the poorly educated subdivision clerk of longest service, often not much better than a despatch or register clerk, and hardly ever capable of drafting an intelligent letter; the quality of the head clerk will need improvement if the accountant is removed, and this means higher pay. This concludes the recorded views of the Conference.

5. *Mr. Hawkins' note.*

Audit.—Efficient audit and accounts control is absolutely necessary for a protection of Government and construction staff alike, but I think the immense mass of detail which has grown into the present system tends to increase the cost of work by handicapping construction staff on details and on delaying work.

Generally speaking, the present system of intricate audit control tends to deprive the staff of necessary freedom in obtaining materials, making slight changes in the work, effecting saving on one sub-head or excesses on another, and so on.

This is too wide a subject to deal with in detail here and I believe Secretary (Retrenchment) has in view dealing with it separately, but generally I would aim at relaxing and simplifying audit control *in detail* during execution and having a general audit on broader lines on completion of a work.

Probable excesses over estimates, expenditure without estimates or without appropriation or such matters should of course be subject to close audit as at present.

An enormous amount of time, which would be more usefully spent on control of works, is at present taken up on inquiry into and submitting explanations on a mass of minor audit objections which have no ultimate useful result whatever. This all tends to increase of staff, clerical and other, and to increase of cost of work owing to reduction of time available for supervision. I think that if the time wasted in dealing with useless petty audit criticisms, inquiries and calls for explanation could be stated in terms of financial loss on a salary valuation basis, the result would be astonishing. This minute control also tends to defeat its object by rendering real financial control more difficult. I think it is essential to efficient administration to place more trust in the staff on the spot. If a member of the staff proves untrustworthy the remedy is simple, but the safeguards at present are, in my opinion, so complicated as to defeat their own ends.

As regards the maintenance of divisional accounts I would make the divisional accountant personally and solely responsible for their correct compilation. The Executive Engineer should confine his attention to the working accounts—his register of works and his vouchers and measurements, i.e., the financial administration of his works on business lines. This would undoubtedly lead to more efficient control. In my experience the 'register of works', which corresponds to the contractor's 'cost sheets', and forms one of the most important factors in watching costs, is frequently badly maintained, the reason being that the Executive Engineer is so piled up with unnecessary work that he has not the time to give proper attention to the important work.

Efficient supervision and control of works is essential to cheap and quick work. At present the control is insufficient. Action should be taken to simplify necessary office work, eliminate all unnecessary work and give the construction staff time to attend to their legitimate duties.

ANNEXURE E.
Special Cases of Revised Estimates.

(1)

B-I AND B-II POLICE LINES AT POPHAM'S BROADWAY.

1. The amount of the original estimate sanctioned in G.O. No. 1553 W., dated 20th October 1916, is Rs. 89,244 for the construction of huts for 18 head constables and 98 constables in three blocks—A, B and C.

2. Amount of the revised estimate sanctioned in G.O. No. 1561 W., dated 6th October 1920, is Rs. 1,00,470 for the construction of huts for 20 head constables and 86 constables.

Excess over the original estimate is Rs. 11,226.

3. The work was started in about September 1917 and one block was practically completed in March 1918. 'B' block was completed in July 1919 and the 'C' block was finished in 1920.

4. There has been a very large increase in the cost of materials and labour since the original estimate was sanctioned in 1916 owing to the war, and this necessitated the revision of the estimate.

5. The excess of Rs. 11,226 over the original estimate is due to the constantly increasing rates of labour and materials in the market, which approximated to 38 per cent generally and in this particular case to 19.7 per cent.

Cost of land—Rs. 2,13,828.

Block 'A' was completed within the estimate amount.

Blocks 'B' and 'C' were revised and items for which excess rates were given

are—

	Rates allowed in 'A' Block.			Rates allowed in 'B' & 'C' Blocks.		
	RS.	A.	P.	RS.	A.	P.
(1) Brick in lime mortar foundation and basement.	27	0	0	30	0	0
(2) Brick in clay superstructure—ground floor ...	23	0	0	27	1	0
(3) Brick in clay superstructure—first floor ...	24	0	0	28	1	0
(4) Brick in lime mortar—ground floor ...	28	0	0	32	0	0
(5) Brick in lime mortar—first floor ...	30	0	0	34	8	0
(6) Arch work in lime mortar—ground floor ...	30	0	0	34	0	0
(7) Arch work in lime mortar—first floor...	32	0	0	37	0	0
(8) Country wood wrought and put up ...	3	10	0	4	0	0
(9) Country wood glazed windows with iron bars, etc., complete ...	1	1	0	2	10	0*
(10) Roofing with flat tiles over teak reapers, chunam borders, etc. ...	23	0	0	26	0	0
(11) Wood oiling, two coats ...	1	8	0	1	12	0
Work was done on contract system.						

(2)

COUNCIL CHAMBER, FORT ST. GEORGE.

Original estimate amount.—Rupees 2,25,000 (sanctioned in G.O. No. 698 W., dated 1st May 1920).

Revised estimate amount.—Rupees 3,15,750 (sanctioned in G.O. No. 824 W., dated 14th June 1921).

Excess of Rs. 90,750 over the original estimate is entirely due to the additional works subsequently ordered and approved by Government:—

	RS.
(1) Covered passage ...	11,000
(2) Pit pillars ...	8,000
(3) Extra foundations ...	4,000
(4) Seats for galleries ...	18,000
(5) Lavatories ...	7,000
(6) Electric fittings ...	31,150
(7) Additional furniture ...	5,500
(8) Sanitary fittings ...	4,500
(9) Minor excess ...	1,600
Total ...	90,750

* Includes batten shutters in this case.

Actual expenditure.—Rupees 3,16,555.

Remarks.—The work as executed departmentally was completed within the sanctioned estimate.

(3)

QUARTERS FOR EUROPEAN NURSES, GENERAL HOSPITAL.

1. The amount of the estimate sanctioned in G.O. Mis. No. 446 W., dated 12th May 1922, is Rs. 39,200.

2. The estimate has not been revised.

3. The tender of T. N. Govindaraja Mudaliyar has been accepted as it is found that the tendered rates are generally lower than the rates provided in the sanctioned estimate. In two out of about 33 items the tendered rates are higher than the sanctioned rates and in three items the rates are the same in both cases—

Description.	Rate in the estimate.			Per	Tendered rate.		
	RS.	A.	P.		RS.	A.	P.
Cutstone work	2	8	0	c ft.	3	0	0
Terracing and Col. Ellis Flooring 1" thick	53	2	0	100 sq.ft.	60	0	0

The work is nearing completion and is not likely to be revised.

(4)

NEW MEDICAL SCHOOL, TANJORE.

Original estimate amount sanctioned in G.O. No. 195 W., dated 7th February 1918.—Rs. 1,77,480.

Revised estimate amount.—Rs. 2,42,100 (1920).

Workslip amount.—Rs. 2,31,299.

Actual outlay.—Rs. 2,20,195.

Remarks.—(a) Excess is due to the provision newly made for the following items not provided for in the original estimate, but found necessary during execution of work:—

	RS.
(i) Providing parliamentary hinges to doors and windows ...	1,065
(ii) Teakwood windows with iron bars	1,683
(iii) Provision for paving with dado tiles in cement mortar, as required by the medical authorities	6,371
(iv) Provision for galvanized iron gutters at valleys	2,823
(v) Raising and levelling ground	1,175
(vi) Lump sum provisions for forming approaches and roadways (Rs. 700) and temporary sheds (Rs. 300) and other items ...	3,605
(vii) Bonus to contractor	7,065
Total	23,787

(b) Excess is also due to the increase in rates due to the rise in price of local materials and labour since the preparation of estimate (Rs. 22,563)—

Description of work.	Original estimate rate.			Revised estimate rate.
	RS.	A.	P.	RS.
Earthwork excavating foundation	6	0	0	8
Concrete broken brick in lime mortar	23	8	0	24
Brick in lime mortar (foundation and basement)	28	8	0	29
Brick in lime mortar (superstructure)	30	0	0	31

Description of work.	Original estimate rate.			Revised estimate rate.		
	RS.	A.	P.	RS.	A.	P.
Arch work in lime mortar (superstructure) ...	31	0	0	32	0	0
Brick column 1' 6" lower diameter and 1' 3" upper diameter in cement mortar with cut-stone caps and bond stone including plastering	2	4	0	2	8	0
Outstone work	2	0	0	2	2	0
Ferro-concrete lintels including plastering ...	3	8	0	4	0	0
Teakwood wrought and put up	5	12	0	8	4	0
Teakwood doors panel and glazed and with glazed head including frames, fittings, etc.	1	12	0	2	0	0
Teakwood doors panel including frames and hinges, fittings, etc.	1	12	0	2	0	0
Teakwood windows glazed including frames, fittings, etc.	1	8	0	1	13	0
Teakwood windows glazed with glazed head including frames and fittings, etc.	1	8	0	1	12	3
Teakwood ventilators glazed moving on side pivots including frames, ropes	1	8	0	1	12	9
Levelling course of sand, 12" thick	2	12	0	2	14	0
Masonry drain around court-yard	2	8	0	2	12	0
Brick in cement partition re-inforced with hoop iron	32	0	0	35	0	0
Gravelling 1½" thick over 4" aralai	5	0	0	5	8	0

(c) Increase due to furniture and fittings as per actual requirements (Rupees 18,270).

General increase in rates since 1918 is about 30 per cent. Actual increase in rates in this case is 13 per cent.

(d) The work has been executed on contract system and is nearing completion.

(5)

IMPROVEMENTS TO VIZIA VILAS, TANJORE.

Original estimate amount sanctioned in C.R. No. 14 of 1919-20.—Rs. 24,800.

The work has been carried out on contract system.

The estimate was not revised but a workslip was prepared in 1922.

IMPROVEMENTS TO THE SARASWATHI MAHAL, TANJORE.

Original estimate amount sanctioned in C.R. No. 49 of 1920-21.—Rs. 7,610.

Revised estimate amount (1922).—Rs. 7,950.

Excess over the original estimate amount is due to certain changes made at the request of the palace authorities, viz., providing Cuddapah slab flooring in place of Henke's tile flooring (excess Rs. 55); providing wire netting for doors and windows (Rs. 265); changing positions of doors and windows (Rs. 20).

The work has been carried out on contract system.

(6)

KUDALA DEPUTY TAHSILDAR'S OFFICE.

The proposal to construct a building for the Deputy Tahsildar's office at Kudala at an approximate cost of Rs. 35,845 was approved in G.O. No. 2312 W., dated 27th November 1914, against which the Superintending Engineer, 1 Circle, technically sanctioned an estimate amounting to Rs. 35,400 in C.R. No. 113/16-17. As the work was not however then considered urgent, no funds were allotted till 1919-20, when Rs. 5,000 was given. The work was actually started in October 1919. As, in the meanwhile, the rates provided for in the original estimates sanctioned in June 1916 had become unworkable, the estimate was revised and sanctioned for Rs. 45,540 in March 1920—vide G.O. No. 450 W., dated 13th March 1920.

Contractors are very rare in these remote and out-of-the-way parts, and this work was entrusted to the only contractor worth the name in the Ganjam division. The work which was started in October 1919, was in progress, but the contractor

grew slack towards the latter part of 1920 stating that the rates were low, and that unless he was given an increase of 25 per cent over the rates agreed upon, and a bonus of 10 per cent, he could not proceed with the work. Thereupon the Executive Engineer, without giving way to the contractor, closed the contractor's accounts in March 1921 and directed that the work should be carried out departmentally. After March 1921, the work was resumed departmentally.

At this time, the Kballikota estate started some large irrigation works at Nirasapalli, a village about 15 miles away from Kudala, which gave rise to a conflict in the demand for materials and labour. It may be noted here that the estate servants, unfettered as they are by the rules and regulations of the Public Works Department Code and the rigorous system of accounts in the department, enjoy a greater liberty of action. To facilitate the execution of the samasthanam work, it is reported that they placed all kinds of obstacles in the way of supply of local building materials and labour to this department. Against such odds, the only possible means which the Executive Engineer could have adopted to make some sort of headway, would have been the granting of heavy advances to the workmen and the petty suppliers, but such advances in such an out-of-the-way place as Kudala, and with such disturbing influences so near, would have involved heavy risks. Meanwhile, the subdivision work had also increased and departmental execution of the work was found difficult. The then Executive Engineer (Mr. Gollan) therefore thought it best to let out the work on contract and entrusted the work again to the original contractor (there was no other contractor worth the name in the division) with the approval of the Superintending Engineer, I Circle, allowing certain increases in the rates. These circumstances necessitated the submission of a second revised estimate for the work.

The Collector of Ganjam submitted in December 1921, a second revised estimate amounting to Rs. 51,750 prepared by the Superintending Engineer, I Circle, for the sanction of Government. It may be noted that even when the original estimate was technically sanctioned by the Superintending Engineer, I Circle, in June 1916, the need for the provision of 100 per cent over the labour charges was recognized, as the work was in an out-of-the-way place, and labour had to be imported; but this increased provision was made only in the case of certain items in the estimate. It is not now apparent why the same increased provision was not made in the case of the other items. Again, when the first revised estimate was sanctioned in March 1920, an extra provision for the remoteness of the locality was sanctioned at 7 per cent. The second revised estimate therefore, provides for (1) the extra provision for the importation of labour at a uniform rate of 100 per cent over the labour charges provided in the schedule of rates current at the time the works were actually carried out, and (2) for remoteness of locality at the 7 per cent already approved. It will thus be seen that the rates provided for in the second revised estimate were only the same as those sanctioned in the current schedule of rates enhanced *uniformly* on the lines already accepted in the original and first revised estimate.

Again, the rates as worked out on the lines referred to above were compared by the Superintending Engineer, I Circle, with those at which the works are being actually carried out. The Superintending Engineer prepared a rough estimate providing these latter rates and it amounts to Rs. 49,210 allowing 10 per cent for contractor's profit. The second revised estimate of Rs. 51,700 submitted by the Collector of Ganjam in December 1921, has since been reduced by the Superintending Engineer, I Circle, to Rs. 49,360 reducing the provisions made for contingencies and petty supervision in the original estimate at the usual provisions of 5 per cent and 2½ per cent of the totals of other items, to the actual expenditure up to date, with small additions suited to the work yet to be done. It will be seen that the second revised estimate amounting to Rs. 49,360 compares favourably with the rough estimate of Rs. 49,210, prepared by the Superintending Engineer providing for the rates at which works are being actually carried out. Further, the excess over the original estimate sanctioned by the Superintending Engineer, I Circle, in June 1916 is Rs. 13,960 (Rs. 49,360 — 35,400), and it works up to $39\frac{77}{177}$ per cent or 40 per cent nearly. It will be observed from the comparative statement that the average percentage of increase in the rates for 1921-22 or 1922-23 in Ganjam

division over those for 1915-16 when the original estimate was sanctioned, is 37 per cent. The above facts relating to increase of rates in the second revised estimate do not take into account a sum of Rs. 830 which has been newly provided in it for forming a connecting road from the Deputy Tahsildar's office to the existing famine road.

(7)

COIMBATORE MEDICAL SCHOOL—SCHOOL BLOCK.

1. Sanction was accorded in G.O. No. 1227 W., dated 18th October 1918, to the construction of a school block for the new medical school at Coimbatore at a cost of Rs. 1,56,000. This amount includes a provision of Rs. 34,000 for fittings and furniture for the school block.

2. The Superintending Engineer has now submitted (March 1923) a revised estimate amounting to Rs. 1,56,800, which excludes the sum of Rs. 34,000 made for fittings, etc., in the sanctioned original estimate.

3. The amount of the original sanctioned estimate for the purposes of comparison with the revised estimate now submitted would, therefore, be Rs. 1,56,900—Rupees 34,000 or Rs. 1,22,900.

The amount of the revised estimate is Rs. 1,56,800.

Excess over the original sanctioned estimate is Rs. 34,800.

The excess of Rs. 34,800 may be allocated under the following heads:—

	RS.
(a) Increase in rates	29,078
(b) New works	200
(c) Deviation in materials	3,178
(d) Insufficient provision in the original estimate	2,585
Total	35,041

Deduct—

(e) Savings due to change of design in foundations, doors, windows, etc.	241
Net excess	34,800

This net excess of Rs. 34,800 is about 28·5 per cent over the sanctioned estimate of Rs. 1,22,000, of which 23·8 per cent represents the excess due to increase in rates between those of 1918 and 1923.

4. This case is being returned to the Superintending Engineer for revision with reference to certain discrepancies in rates provided in the estimate.

(8)

CIVIL HOSPITAL, VIZAGAPATAM.

Sanction was accorded in the following Government Orders for the construction of Civil Hospital, Vizagapatam:—

	RS.
(1) G.O. No. 961 W., dated 23rd July 1917 (items 1-9 and 18 to 27).	4,97,910
(2) G.O. No. 1045 W., dated 9th July 1920 (out-patient dispensary and quarters for the staff, kitchen, etc.).	87,290
(3) G.O. No. 1457 W., dated 20th September 1920 (Mortuary)...	5,800
Total	5,91,000

2. Out of the several items of work sanctioned in the above Government Orders, a few items amounting to Rs. 49,690 have been omitted for the present. Deducting this, the amount of the scheme as sanctioned would be Rs. 5,41,310.

The work is done departmentally.

3. The scheme now costs Rs. 5,78,840 resulting in an excess of Rs. 37,530 which is 6.9 per cent in excess of the sanctioned amount. Of the excess of Rs. 37,530, Rs. 19,090 is due to change of design, and the remaining amount of Rs. 18,440 is due to increase in rates.

The work is in progress and a consolidated revised estimate has not yet been received from the Superintending Engineer. The general increase in rates from 1917 to 1923 is about 35 per cent.

Increases in certain items are noted below :—

Description.	Rates in 1917-18.			Rates in 1922-23 which were the same as in 1921-22.		
	RS.	A.	P.	RS.	A.	P.
(1) Concrete broken stone in chunam ...	7	3	0	9	15	0
(2) Country brick work in chunam for foundation and basement.	16	1	0	18	14	0
(3) Honey comb tiled work in chunam and white washed.	7	4	0	10	14	0
(4) Random rubble in chunam in superstructure.	10	10	0	13	9	0
(5) Flooring with granite paving stones laid on 4 inches of concrete and neatly pointed in Portland cement.	21	1	0	28	12	0
(6) Flooring with Cuddapah slabs 1 inch thick and pointed with Portland cement.	20	5	0	30	15	0
(7) Plastering with chunam, 2 coats ...	2	9	0	3	6	0
(8) Plastering with Europe Portland cement $\frac{1}{2}$ inch thick (1 : 2).	8	11	0	12	9	0
(9) Best terrace roofing with brick on edge, 3 inches of well beaten concrete, etc.	23	9	0	29	14	0
(10) Best tiled roofing with flat and pan tiles and chunam borders including teak reapers ...	17	1	0	26	14	0
(11) Painting with chocolate paint, 2 coats ...	3	4	0	6	4	0
(12) Teak wood wrought and put up ...	5	6	0	8	12	0
(13) Sal wood, wrought and put up ...	3	4	0	4	12	0
(14) Teak wood $\frac{1}{2}$ panel and $\frac{1}{2}$ venetian doors with fittings, etc., complete ...	1	3	0	2	6	0
(15) Teak wood $\frac{1}{2}$ panel and $\frac{1}{2}$ glazed doors with fittings, etc., complete ...	1	3	6	2	8	6
(16) Windows, venetian with iron bars, etc., complete ...	2	1	6	4	1	6
Labour—						
Bricklayer, I class ...	0	10	0	0	12	0
Carpenter do. ...	0	10	0	0	12	0
Man coolie ...	0	4	0	0	5	0

(9)

ELECTRIC INSTALLATION TO THE MAIN WARD, CLINICAL SCHOOL AND PASSAGES ATTACHED TO THE NEW RAYAPURAM HOSPITAL, MADRAS.

Original estimate.—Amount, Rs. 43,389 sanctioned in G.O. No. 153 W., dated 23rd January 1920.

Revised estimate.—Amount, Rs. 50,464 sanctioned in G.O. No. 120 W., dated 29th January 1923.

Remarks.—Excess of Rs. 7,075 is due to increased cost of electric materials. In the item 'passenger lift' alone the excess is Rs. 4,600 which is the difference between the tender rate and the original estimate rate.

(10)

OPERATION THEATRE, GOVERNMENT MATERNITY HOSPITAL, MADRAS.

I Estimate.—Amount, Rs. 43,138 sanctioned in G.O. No. 183 W., dated 28th January 1915, for improvements to the operation theatre at the Government Maternity Hospital.

II Estimate.—Amount, Rs. 55,200 sanctioned in G.O. No. 712 W., dated 5th May 1920. This is in supersession of the estimate I above and is for constructing a

combined ward and operation theatre according to fresh plan prepared at the instance of the Surgeon-General to suit the requirements of the Government Maternity hospital which is becoming more and more important as a teaching centre for students.

II Estimate revised.—Amount, Rs. 60,280 sanctioned in G.O. No. 439 W., dated 1st April 1921. This estimate was based on the lowest tender rates.

II Estimate revised for the second time.—Amount, Rs. 72,550 sanctioned in G.O. No. 147 W., dated 7th February 1923.

Excess due to—

	RS.
(i) Provision of dado tiles for walls (up to 6' 0" high) instead of lime-plastering three coats, as required by the medical authorities.	5,307
(ii) Provision for paving with white marble slabs for an additional area of floor, as required by medical authorities.	2,279
(iii) Increased expenditure incurred in reinforced concrete work as per actuals at the current rates.	2,248
(iv) Actual debits against item 'Medical and Sanitary fittings'—stores indented by the Medical Department.	1,900
(v) Revision of quantities based on actual work (earthwork, sand filling, brickwork in foundation, cornice), etc.	536
Total ...	12,270

Concrete foundation has been done departmentally and the rest of the work is being done on contract system.

(11)

ALTERATIONS AND IMPROVEMENTS TO THE CELLS AT THE CENTRAL JAIL, SALEM.

I Estimate.—Amount, Rs. 10,300 sanctioned in G.O. No. 714 W., dated 30th March 1914, for alterations and improvements to one out of the six blocks of double-storeyed cells at the Central Jail.

II Estimate.—Amount, Rs. 47,000 sanctioned in G.O. No. 1542 W., dated 18th October 1916, for alterations and improvements to the cells in the upper storey of all the six main blocks of the Central Jail.

II Estimate (above) revised.—Amount, Rs. 61,700 sanctioned in G.O. No. 940 W., dated 27th September 1922.

Remarks.—The lowest tender was 57 per cent above the second estimate sanctioned, and the work was done departmentally. The excess of Rs. 14,700 (over the second estimate) sanctioned in the revised estimate is only 81 per cent, and it is due to enhanced rates found necessary during execution.

Comparing 1916-17 and 1921-22 rates, the increase is 45 per cent in general.

ANNEXURE F.

Note by Mr. W. P. Roberts, M.I. Mech. E., M.I.E. (Ind.), on the comparative cost of work executed in Public Works Workshops and by private firms.

It is not possible to prepare a really complete statement of the comparative costs of all the work done in the Public Works Workshops with outside rates, as the latter are unobtainable for the greater part of the work done. All that can be done is to make a general comparison and to give specific instances for the comparatively few cases where outside prices have been actually obtained.

2. The most essential works for which the Government Workshops in Madras are needed are—(a) the construction of large steel shutters for irrigation works and (b) for repairing and maintaining in proper working order the very large amount of machinery normally in use throughout the Presidency, both on construction and repair work, and also permanently on irrigation and other works. Both these classes of work fluctuate greatly in their amount, and to keep the staff and plant fully employed all the year round is only possible by also undertaking as far as possible (c) all the other sorts of mechanical work constantly needed for Government purposes, such as small irrigation sluices, steel work for roof trusses, stanchions and girders for buildings, small bridges, tanks, cast-iron columns, special pipes, etc.

3. The large irrigation shutters under (a) cannot be made by any local firm in Madras as they are not equipped with the necessary plant for turning out work of the size and quality required. Until about 15 years ago, most of these large shutters in the north of India and some of those for Madras Presidency were imported from England and were made by Messrs. Ransomes & Rapier. The Periyar escape shutters and emergency head sluice were the last supplied by them for this Presidency. It was found by experience that they could be made so much cheaper here that since then all subsequent ones were made in the Public Works Workshops. Sir Thomas Waid, late Inspector-General of Irrigation, told me that their experience was the same in the north of India. Government installed improved machinery in their Workshops at Amritsar and when the above firm learnt this, they intimated that their standard rates for the shutters hitherto obtained from them would be reduced 33½ per cent for any future orders, but even so it was found cheaper and more satisfactory to get the work done in the Government Workshops.

4. The only definite quotations recently obtained from Home for large irrigation works is for 3,300 running feet of new 6 feet high falling shutters now under consideration for the Kistna anicut. The Home quotation dated January 25th works out to Rs. 2,20,506 landed and put on rails at Madras.

For the same work, if done in the Public Works Workshops the cost would be Rs. 1,78,000 based on the current market rates of steel in England as advised by last mail, which is £1 per ton higher than at the time the firm's tender was made in January. So their present price would probably be increased accordingly. (The 400 tons of steel plates and angles required for this work would have to be specially imported.)

5. As regards (b) Machinery repairs, it is most difficult to make any exact comparison of costs, as each job is different and the cost depends on the quality and finish of the work. In very few cases is it possible to get a price for an exactly similar job carried out by a local firm? The following are a few instances for which outside prices are available:—

(i) *Work Order E-15.*—Valves for a large oil-engine were made in these Workshops at a total cost of Rs. 15 each. The price charged by a local firm for similar valves for the same engine was approximately three times as much.

(ii) *Work Order No. G-1952.*—One large connecting rod and 150-C.I. piston rings 16" diameter were made in the Public Works Workshops for the Diesel engine at the Divi Pumping Station at a cost of Rs. 1,500.

The cost of the same articles, as quoted at the same time by the makers of the engines, would have been Rs. 6,400 (at Rs. 15 to £1 and including freight charges, etc.).

(iii) Large numbers of valves and seatings and other parts for these Diesel engines, such as air compressor valves, pistons, cylinders and sundry other parts, have been made in these Workshops at costs from a quarter to a half of the Home prices, but it is difficult to pick out the items individually.

(iv) *Work Order No. G-1502.*—Two large rough turned mild steel impeller shafts with solid forged couplings were recently made at Public Works Workshops for the ex-German dredger now in use at the Cochin Harbour. The total cost was Rs. 700. No local Madras firm would have undertaken this work, and the cost compares very favourably with the Calcutta and Bombay quotations for the forging obtained for item (ii) above.

(v) *Work Order No. G-488.*—The old turbine at the Government Quinine Factory having worn out, it was replaced by a new Pelton wheel made in the Public Works Workshops at a cost of Rs. 7,392. The quotations obtained from England for the same article, plus freight, etc., amounted to Rs. 15,525.

6. For the miscellaneous jobs under (c) definite quotations from outside firms are only available for a few works. All traceable for the past two years are tabulated in the attached statement and show that except in two instances the Public Works Workshops cost was lower and in these two cases the high cost is due to the rate of materials available in Stores which were obtained during the war period at high rates:—

Serial number and W.O. number and date.	Description of work.	P.W.W.		Average of firm's quotations. C
		A	B	
1. G-581, 11th April 1921 ..	Supply of 14 special cast iron pipes for Madras drainage works.	Rs. 7,714	Rs. ..	Rs. 8,300
2. G-1132, 4th April 1922 ..	Supply of one closed steel record rack, 8'x2' 6" x 10' 7½" and 8' 0" x 2' 6" x 9' 3".	1,398	..	1,040
3. G-1155, 26th April 1922 ..	Supply of 10 jail cell ventilators to S.P. No. 897 ..	367	263	370
4. G-1172, 10th May 1922 ..	Supply of one wrought iron ornamental gate to S.P. No. 915.	252	192	234
5. G-1183, 16th May 1922 ..	Supply of two M.S. gates to S.P. No. 14 ..	243	204	342
6. G-1248, 20th June 1922 ..	Supply of three steel framed roof trusses (24' 0" span).	512	343	259
7. G-1129, 3rd April 1922 ..	Supply of 8 steel framed roof trusses	1,210	..	1,519
8. G-1504, 12th April 1923 ..	Supply of 24" flanged cast iron pipe	185	..	225

In this statement—

Column A gives the actual total cost of the work as executed in the Public Works Workshops, with materials at rates issued from Public Works Stores.

Column B shows what the cost would have been if the Stores issue rates had been on a par with the current market rates, for materials which were war-time stock at high rates.

Column C is the average, except for items 1 and 8, of four separate Madras, Calcutta and Bombay firms, tenders for the same work and does not include any provision for railway freight from Bombay or Calcutta which would make these rates considerably higher.

7. *Conclusion.*—From the above it will be seen that under (a) irrigation works, etc., and (b) repairs and renewals to machinery, the cost of work done in the Public Works Workshops is very considerably lower than outside firms and Home prices.

Under (c) Miscellaneous, the saving is not so great, but it is necessary to undertake this work in order to level up the fluctuations and unequal incidence of the jobs in hand under the other heads.

ANNEXURE G.

AMALGAMATION OF PUBLIC WORKS "BUILDINGS AND ROADS" AND LOCAL
FUND ENGINEERING ESTABLISHMENTS.*Abstract of recorded opinions.*

- (1) The Public Works Reorganization Committee.
- (2) Sir Lala Ganga Ram.
- (3) The Central Provinces Retrenchment Committee.
- (4) The Bombay Retrenchment Committee.
- (5) The Bengal Retrenchment Committee.
- (6) The Punjab Retrenchment Committee.
- (7) The United Provinces Public Works Committee.

1. *The Public Works Department Reorganization Committee.*—"The main defect of the present system is the duplication of engineering staff entailed thereby, one establishment being employed for roads and buildings directly managed by Government and another for public works in charge of district boards, both working alongside each other in the same area. The evidence received by us shows the unsuitability and extravagance of this arrangement.

"To remedy these defects two alternatives are possible, the first that all public works should be undertaken by the Public Works Department which is the system at present practically in force in Bombay and the United Provinces, the second that all ordinary public works should be transferred to local bodies.

"We have stated the objections to the present dual arrangement and we are strongly opposed to the alternative proposal to the transfer of district board works to the Public Works Department. The centralization of such work in a Government department would result in a serious discouragement to local self-government which it is the policy of Government to advance.

The Committee, therefore, recommended that the construction and repairs of all ordinary Government buildings should be entrusted to the local bodies, but that exceptions would have to be made of large important building projects beyond the competence of the district board engineering staff.

2. *Rai Bahadur Sir Lala Ganga Ram* in his minute to the above report wrote:—

"I believe (and this belief is based on practical experience of local boards and municipalities extending over twenty years, during which I served as an ex-officio member of all such as fell, from time to time, within the limits of my charge) that to give to such bodies full powers of control over their technical staff and over the actual details of the execution of work will endanger the success of the whole scheme and subject it to a risk of failure such as attended the same experiment in the United Provinces in 1882 and in Bengal ten years later.

"I am convinced that the subordination of the engineer to the district boards in their present state of development would deter large numbers of suitable candidates from adopting engineering as a profession.

"For these reasons it appears to me that the majority recommendations if accepted will entail an excessive sacrifice being made at the altar of local self-government and, without desiring in any way to belittle the importance of the latter aspect of the case, I am of opinion that the experiment, involving as it does the summary abolition of a great department and the transfer of works costing nearly Rs. 6½ crores per annum to a more or less untried agency, is both too drastic and too expensive a one to be justifiable on this ground alone."

Rai Bahadur Sir Lala Ganga Ram then formulated an alternative scheme the main points of which were the maintenance of two separate services, an imperial or superior service and a provincial or second service, the chief engineer, his personal assistant and the inspectors of works being members of the imperial service and the district engineers being drawn from the provincial service, and the members of the imperial service getting their training in the earlier years of their service as district engineers or in charge of special works directly under the inspectors. The administrative and financial control of local fund works would be left in the hands of the local bodies.

3. *The Central Provinces Retrenchment Committee.*—"We understand that Government is considering the question of the transfer of public works to local bodies. We are in favour of this transfer."

4. *The Bombay Retrenchment Committee.*—"The scheme of transferring roads and buildings generally to local boards which was recommended in the report of the Public Works Reorganization Committee, 1917, commends itself strongly to us as a measure of most desirable decentralization and economy."

5. *The Bengal Retrenchment Committee* are in agreement with the recommendations of the Public Works Reorganization Committee generally and make certain recommendations as to the manner and extent to which these recommendations should be given effect to.

6. *The Punjab Retrenchment Committee.*—"The Committee recommends that immediate action be taken on the Sly Committee's report, and that the proposal of Sir Ganga Ram be accepted for this Province as leading to an immediate retrenchment, but that in order to facilitate the possibility of having recourse to the expedient devised by the majority of the Sly Committee, in future engineers should be engaged on condition that their services would be subject to transfer to district boards if necessary. The Committee fully realise the importance in the education of local bodies towards self-government, of giving them control of public works within their area. But the majority are content to differentiate the technical execution of work from administrative control and, while they would leave the latter with the Board, the former must, they consider, in the interests of economy, be entrusted to the most qualified staff."

7. *The United Provinces Public Works Committee.*—"This Committee is in entire agreement with the Government of India in appreciating the educative value of the transfer of public works to the control of local bodies, but feels bound to consider as of at least equal importance at the present time the necessity for economy. Financial considerations were not disregarded by the 1917 Committee; the basis of their argument for the transfer of works to local bodies was that the costly duplication of engineering staff should be avoided; but it is clear that considerations of economy were in the end given only a secondary place in the Committee's report.

"The Committee is not convinced that the complete transfer of all public works to the charge of local boards would at the present stage be either economical or practicable. The administrative resources of the district boards are not such that they can deal efficiently with additional expenditure which would amount to at least 60 lakhs a year, of which more than half would be on behalf of Government. Should all this work be transferred, a waste of money would be inevitable and the waste would be more likely to occur on those works in which the local board had no very great interest, namely, on those which they constructed or maintained for Government. The risk of waste could only be met by maintaining a large and expensive Government inspectorate. No wholesale reduction in the staff of the Public Works Department could be effected except on heavy payment for compensation. It is probable that the staff would have to be retained in any case as a safeguard against the breakdown of the new system.

"Our conclusion is that it is practicable, feasible and desirable to transfer to the control of local bodies all building work for which they find the funds. Buildings partly financed by Government would be subject to such restrictions as the Government may find it suitable to impose, having regard to the nature and importance of the work. Buildings to be constructed entirely at the cost of provincial revenues should not be transferred."

VIII.—REPORT OF THE SURVEY AND SETTLEMENT
RETRENCHMENT COMMITTEE.

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REPORT OF THE CONFERENCE ASSEMBLED TO CONSIDER THE
QUESTION OF RETRENCHMENT IN SURVEY AND SETTLEMENT
DEPARTMENTS.

A meeting of the Survey and Settlement Retrenchment Committee was held in the Committee Room of the Legislative Council at 12 noon on Friday, the 18th of August 1922, when the following members were present:—

1. The Hon'ble Sir Muhammad Habib-ul-lah Sahib, *Kt.*, C.I.E., *President*.
2. Mr. G. F. Paddison, I.C.S.
3. Mr. A. Y. G. Campbell, C.I.E., C.B.E., V.D., I.C.S.
4. Mr. G. W. Priestley, I.C.S.
5. Mr. F. V. P. Gompertz
6. M.R.Ry. Rao Sahib J. Venkatanarayana Nayudu Garu.
7. „ Diwan Bahadur M. Ramachandra Rao Pantulu Garu.
8. „ Diwan Bahadur M. Krishnan Nayar Avargal.
9. „ Diwan Bahadur T. N. Sivagnanam Pillai Avargal.
10. „ Rao Bahadur T. Balaji Rao Nayudu Garu.
11. „ M. R. Seturatnam Ayyar Avargal. ,
12. Qadir Nawaz Khan Sahib Bahadur.

Mr. E. W. Legh, I.C.S., Revenue Secretary, was also present.

M.R.Ry. Rai Bahadur T. A. Ramalinga Chettiyar Avargal was unable, owing to illness, to take part in the conference.

Notes prepared by the department giving details of—

- (1) the process of survey,
- (2) the work of the special staff, and
- (3) the Settlement department,

had been issued to the members in advance. The conference accordingly opened with the discussion of these notes. The President raised the main issue by asking the question whether any system could be devised which would give the essential information required and be cheaper than the present system.

Attention was then directed to the Survey department. Mr. Ramachandra Rao asked whether it was essential to resurvey the areas surveyed under block-map system between the years 1892 to 1896. The defects of the block-map survey were pointed out. There being no theodolite basis for the field maps, it is impossible to check or locate errors discovered in the office and consequently the only way of preparing a village map under that system is by fitting the various blocks together with a pair of scissors.

It was accordingly decided that it was essential to resurvey these areas and the conference agreed that this resurvey must go on. It was noted from looking up the programme that this resurvey should be completed between the years 1923 to 1935.

Mr. Ramachandra Rao then asked whether the whole strength of the five parties would be maintained to that date. It was pointed out that there were permanent hands for only three parties in the superior grade and for two parties in the inferior grade and that supposing one of the five parties were reduced this would only mean a transfer of the permanent hands to the remaining parties which would occupy longer time to complete the resurvey than that fixed in the programme referred to above. There was therefore no financial gain in considering the reduction of the permanent staff until the work was completed.

Mr. Ramachandra Rao suggested that before any fresh area which had been surveyed on the block-map system was taken up for resurvey it should be examined to see whether such resurvey was necessary both in the interest of the administration and of the ryot. This was agreed to.

The committee then turned to the questions on the printed paper with the view to giving definite answers to them.

Question 1.—What information should be maintained by Government as to holders of land and areas held by them?

Mr. M. R. Seturatnam Ayyar asked whether the printing of the settlement register was necessary in view of the fact that it took about five years to print the register and make it available for the public, by which time the entries would have become antiquated. He suggested that the quinquennial adangals might be maintained in the taluk office in its stead, and certified copies be granted to the parties concerned.

Mr. Paddison pointed out that while there were elaborate checks in the preparation of the settlement register, there would be none in respect of the adangals.

The President said that the course suggested would be tinkering with the results of a settlement arrived at after great trouble and expense.

It was not thought possible to dispense with any of the information at present maintained.

The conference expressed a desire to restore the name of the pattadar in the settlement register. It was pointed out that this had been omitted on grounds of economy. The conference considered this to be a bad economy and held that the retention of the name was of some use as it frequently facilitated the settlement of disputes in later years.

Question 2.—Is it necessary to survey every revenue holding irrespective of the size or class of land (e.g., can limit be set)?

The discussion centered round the question of the necessity for demarcating every revenue holding and every bend in the boundaries of such holding. After the details of the present system had been discussed at some length the committee expressed itself satisfied with the present arrangements.

Mr. Sivagnanam Pillai however raised the question whether they should be a limit of 50 cents for wet and 2 acres for dry below which no subdivision should be made. It was pointed out that this matter had been before the Government on previous occasions and that it required legislation. The President agreed to consider the matter.

Incidentally it was suggested by Mr. Ramachandra Rao that poramboke should be demarcated by fixed marks in cement or brick work. A rough calculation of the cost of such demarcation showed that on the ground of expense this would be impossible. It was calculated that the cost would be about Rs. 2-8-0 a stone and supposing there were 150 stones per village for 22,500 villages the cost would be 84 lakhs.

Question 3.—Should correct survey records be kept of every revenue holding?

A suggestion was made by Mr. Seturatnam Ayyar that khandam maps containing all the details now given in the field map would be cheaper than individual field maps. Mr. Gompertz pointed out that the maps would have to be of considerable size if the details were to be printed in them and would be rather unwieldy. He also pointed out that the field maps would have to be prepared in order to prepare khandam maps. There would therefore be no saving of expense. Finally it was pointed out that the field maps are not now printed and accordingly there was not any real saving to be made in this way. The committee thereupon resolved that the records now maintained should be continued.

Question 4.—To what extent should different holdings or different classes of land be demarcated?

The committee expressed itself in favour of demarcating the beads of survey fields if financial consideration would permit; but agreed that they were not prepared to recommend expenditure of money on additional demarcation and resolved that the present arrangement should continue.

Question 5.—Should it be decided that some of the items of work now done in the course of survey be eliminated, is it the opinion of the conference that such works may be done if the ryot is willing to pay for it?

The conference agreed that subdivision made at the request of ryots after survey or between surveys might be charged to the ryot provided that the cost of such subdivision was moderate.

Question 6.—Can the process of survey or revision of adangals (or preparation of the survey records) be cheapened? And if so, can the members suggest any method?

Mr. Ramachandra Rao inquired what provision was now made for the maintenance and upkeep of the records once prepared. Here, the President pointed out that this was the purpose for which the Land Records department had been instituted and that owing to the resolution of the Legislative Council they were now left only with the Revenue Inspector who had been employed for the purpose of land records, that several other provinces in India had Land Records department for this special purpose; but that under the present conditions there was no agency left for the maintenance of land records other than the Revenue department. The conference were unable to suggest any method for cheapening the processes of survey or revision of adangals.

Question 7.—Can the members suggest any method by which the process of resettlement of the assessment be cheapened?

Mr. Balaji Rao Nayudu asked whether a special staff was necessary at the time of resettlement and this aspect of the case was fully discussed.

Mr. Balaji Rao Nayudu then expressed the opinion that the special staff was unnecessary. The President replied that no doubt at the first blush it appeared that the special staff was an unnecessary appendage to every settlement party. But whatever might be the condition of affairs in the future, at any rate in the past it was impossible to bring revenue registers up to date without the special staff. Now that they were going to secure correct records from the Survey department and now that the resettlements were expected to bring all the revenue registers up to date, he was hoping to issue orders that in the future it should be recognized that a special staff would not, as a matter of course, be an appendage to every settlement party.

To the inquiry of Mr. Ramachandra Rao as regards other retrenchment proposals, the President replied that so far as the resettlements were concerned he summoned to his aid a special conference about the 14th May.

As a result, the compilation and publication of a large number of statements were done away with. The future Settlement officers would not collect all the minute details which their predecessors had been collecting. The conclusions of the conference were embodied in G.Os. No. 1178, dated 24th June 1922, No. 989, dated 1st June 1922, and No. 1181, dated 28th June 1922. These three Government Orders were issued as a result of the above conference. The President then asked the committee what other suggestions they offered for simplifying the course of resettlement, besides the statistical portions of the settlement reports.

Mr. Balaji Rao Nayudu then said that he did not see the necessity of such a large establishment and their going on with reclassification, etc. The President explained that they had already given up the reclassification of soils and water-sources, the re-examination of yield from land, recalculation of cultivation expenses, etc. The Special Settlement Officer was now expected to scrutinize carefully the previous settlement operations with reference to the report in his hands. If, on inspection of the district, he was satisfied that the framework of the original resettlement could be absolutely relied upon, he would not start inquiries as to whether the reclassification or other original work of the previous settlements were correct or not. An economic inquiry now loomed as a very large question. In pursuance of a resolution passed in the Legislative Council orders were issued to Settlement officers that it was very essential to find out in the first instance the economic condition of the district to be resettled.

Mr. Krishnan Nayar interposed saying that in connexion with the Resettlement Bill they considered various suggestions for conducting resettlements. Provided other things were there, it was merely a percentage enhancement and the application of a commutation rate.

The President continuing said that the prices of the previous twenty non-famine years were taken and a commutation rate arrived at and a percentage enhancement was fixed. In some places there would be circumstances justifying levelling up of inequitable assessments as in the Trichinopoly district. A Settlement officer would have to see how the previous settlement affected the people of a district and what the economic condition of the ryots was; whether the people had become richer or poorer, whether the lands had increased or decreased in value, whether particular sources had ceased to exist. He should also see whether any large irrigation works had been constructed and whether conditions had now changed. But under normal conditions the resettlement would be nothing more than a percentage enhancement. The President then explained the necessity for the special staff and the five parties now working out of which the permanent staff bore a small proportion, the rest being temporary added to or reduced to from time to time according to necessity.

Mr. Balaji Rao Nayudu then said that he simply wanted to know if there could be any reduction possible but after the explanation of the President he dropped the question.

Mr. Ramachandra Rao observed that he could not suggest any cheapening method unless they dispensed with the inquiries, and the President inquired whether the former would suggest the lessening of the economic inquiry to which he replied that on the other hand the question of indebtedness should be more thoroughly examined.

The President asked Mr. Priestly whether anything more was done to which the latter replied that an examination of lease values was also done. The President added that the Government rightly attach much importance to lease values.

The committee finally answered question 7 in the negative.

The committee regret that besides the suggestion made under question 5, they are unable to suggest economies in any other direction, nor the substitution of the present system by any other.

NOTE ON SURVEY DEPARTMENT.

Madras is the only Province in which revenue surveys have been made on professional lines if the period 1890—1900 be excepted. In other Provinces Revenue surveys in Madras and in other parts of India compared. the chief aim of revenue surveys was

merely to determine the area of revenue holdings approximately. About the end of 1890 the question arose why surveys in Madras should not be made cheaper, and the Superintendent of Survey made a tour in other parts of India to examine the methods there. As a consequence, surveys on the lines followed in other Provinces were commenced, and the initial survey of the districts of Malabar, South Kanara, portions of Anantapur, and the resurvey of Trichinopoly were conducted on what was called the block map system. Later, the districts of Kistna, Godavari, Salem and part of Guntūr were re-surveyed under a modification of this system.

2. In these surveys accuracy was sacrificed to cheapness and they have been found useless for the purpose of revenue administration. These surveys cannot be maintained nor can they be restored. A fresh survey has been declared necessary and has been made in part of this area at greater expense than would have been incurred had an accurate re-survey been made in the first instance and the framework of the initial survey been preserved.

3. Thus the work of about a decade (1890—1900) has been a costly failure due to a pennywise policy. From 1901 onwards better counsels have prevailed and the current systems of survey and re-survey are, it is believed, as efficient and economical as it is possible to make them.

4. The following results are obtained:—

(1) A framework of theodolite survey which, with a little care, is permanent, and which, if not actively interfered with, can be restored at a small cost at intervals of, say, 30 years.

(2) The production of a village map showing boundaries of all survey fields plotted to scale, the most important topographical details and the area of the village.

(3) A field measurement atlas containing a plan of each survey field with its subdivisions, on a scale sufficiently large to show all measurements and the area of the field and of its subdivisions.

(4) A register giving the name of the owner and occupier of each revenue field, the nature of the land, tenure, class of soil, source of irrigation and assessment.

In most districts granite stones have been fixed at bends on survey field boundaries; in a few taluks surveyed since 1919 stones were planted only at trijunctions of survey fields, and larger granite stones mark each theodolite survey point.

5. Such a survey is permanent. Even should a river burst its banks and sweep away houses, roads, and all land marks over a wide area, the survey could be reproduced correctly and all boundaries restored. It will suffice for the purposes of revenue administration for many years and can be brought up to date at any time for a trifling cost. A ryot can obtain a plan of his holding, however insignificant, showing all measurements and the area for from one anna to four annas. A buyer of land can thus ascertain its boundaries and area with certainty and obtain information to guard against encroachment by his neighbour. Land needed for acquisition proceedings can be cheaply and readily mapped and the existing maps altered. But to obtain these benefits, an accurate survey is needed in the first instance.

Benefits to landholders.

6. Let us now discuss briefly the revenue surveys of other Presidencies. In

Revenue surveys in other Presidencies discussed. No complete record of measurement available in any case and none at all in some.

not one of them is there a complete record of field measurements, and in some there is none at all. The general practice is to fix points by the theodolite village boundaries. Ordinarily these are not

permanent marks and the best are clay cylinders buried in the ground. A skeleton map is plotted, and with its guidance the surveyor measures lines across the village

How the village map is prepared.

and offsets to important bends on field boundaries, crying out the measurements

to another surveyor who plots them, drawing in by the eye bends of fields not offsetted. No record is kept of these measurements, and it is evident that the chance of mistakes is very large. No stone demarcation is made of field points. It is impossible to check the plotting of the map in office or to fix any field boundary accurately later on. In the Punjab the maps show the measurements of field boundaries, but no interior measurements to fix them, and in Bombay there is a field book containing a record of measurement, but not to scale. In the United Provinces, Bengal, Orissa and Bihar there is no record of field measurement at all. It is thus evident that in Madras the system of revenue survey is immeasurably better than elsewhere.

7. Unfortunately the methods of the surveys in Madras are not understood

Previous inquiries as to the necessity for elaborate surveys in Madras answered in the affirmative.

outside it, and the Government of India have from time to time asked for an inquiry whether such an accurate survey was necessary. The result has always

been a reply in the affirmative. The two most recent inquiries were conducted, one by Lt.-Col. Crichton, C.I.E., Survey of India, in 1912 and another in 1914-15 by a committee consisting of a senior civilian from the Punjab, another from Madras and the Directors of Land Records and Survey. Lt.-Col. Crichton was at the time Director of Surveys, Bengal, and may naturally be supposed to have had a bias in favour of his own system. However, he declared the Madras system admirable and recommended its continuance. The committee that conducted the second inquiry were unanimous in reporting that the system followed in Madras was not too elaborate and advised no change, save a reduction in stone demarcation. Even this last recommendation was against the whole weight of the evidence of non-official witnesses.

8. Although revenue surveys in Madras are so much more accurate, detailed

Surveys in Madras comparatively cheap. *superiority over other revenue surveys.* Lt.-Col. Crichton gave the rate per square mile in 1912 for the revenue surveys of Bengal, and it was found that those of Madras

and elaborate than those elsewhere, *cost is in no way proportionate to their* cost about one anna more per acre.

9. A specimen of a village map from Bengal is enclosed and may be compared

Specimens of village maps, Bengal and Madras, compared.

with the second enclosure, a village map of this Presidency. An extract from an atlas of field plans of Madras is also enclosed. None such is available in any other Presidency. Since Mr. Hatchell became Director, the Madras Survey Department has aimed at restoring the initial

Aims of the Madras Survey Department.

surveys of the Presidency in the light of modern methods and producing a survey,

the framework of which will last for generations. The programme of surveys enclosed shows when this work will be completed. Thereafter, periodical re-surveys will be required to keep the work up to date, owing to the frequency of change of ownership and subdivision of properties, but such surveys will cost little in comparison with those now in progress as the framework is being made so permanent. *In brief, the greater part of the Madras Presidency possesses a revenue survey immeasurably superior to those of other parts of India and costing very little more. It has been shown on page 1 above how costly was the experiment of cheap surveys conducted between 1890-1900.*

REVENUE DEPARTMENT.

TENTATIVE LIST OF SUGGESTIONS FOR SURVEY AND SETTLEMENT RETRENCHMENT COMMITTEE.

PRESENT METHOD OF SURVEY.

Practically all surveys now being taken up by the regular Survey Parties are resurveys necessitated by the unsatisfactory nature of the surveys and resurveys made between 1890 and 1900.

2. The unit for survey is the revenue village. The first and essential preliminary operation is the demarcation of the boundaries of the village and of the khandams of from 150 to 200 acres in extent into which the village is divided. These boundaries are surveyed with theodolite and chain, the survey is connected and harmonized with the G.T. stations of the Survey of India, and traverse are set up and plotted to scale 16"=1 mile. The skeleton plots thus prepared are A the frame work on which the village map is built

3. Next comes the demarcation of the holdings in the village khandam by khandam. In this process, existing boundaries are accepted as a rule, no attempt being made, except in cases of dispute, to relay boundaries of previous surveys as they may have shifted or been obliterated owing to changes in occupation, etc.

4. When work within a khandam is started, a sketch thereof is prepared showing all the holdings in it, and these are formed into compact groups—called survey fields—each containing about 10 acres in dry and 5 acres in wet. The included holdings (if more than one) in each survey field are mapped as subdivisions. The points in the sketch where three or more survey fields meet are noted as trijunction points and are demarcated with stones. Other points which, according to existing orders, are similarly permanently demarcated are—

(1) theodolite stations;

(2) bends on poramboke survey fields and subdivisions and on the village boundaries; and

(3) ends of diagonal lines (see infra) not coincident with trijunction points.

When these trijunction points have been demarcated the lines forming the boundaries of survey fields and of subdivisions are measured. The survey is with the ordinary familiar chain and cross staff. Diagonal lines are also measured between trijunction point so as to form a net work of triangles over the khandam and the bend points on the boundaries offsetted. This provides a check on the correctness of the distances of the field and subdivision boundary lines, and between the trijunction points. Field maps are then plotted on the scale of 40"=1 mile, showing all measurements. Lines called *putal* lines are then measured between theodolite stations on khandam and village boundaries, and on these offsets are taken to trijunction points within 5 chains' distance. This provides a series of bases for plotting the survey fields in the skeleton of the village map referred to at A supra. The surveyor's work is inspected and revised if not found good.

5. While survey is in progress complaints of wrong demarcation which may be preferred under section 11 (2) of the Madras Survey and Boundaries Act IV of 1897, are enquired into and disposed of. Appeals against such orders may be preferred under section 12 (1) (a) of the Act, to a higher officer against whose appellate decision an appeal may be made to a Civil Court if preferred within a year of the receipt of the order. The above is briefly the course of operations in the field. At the same time in the Trichinopoly district the surveyors prepare a book known as the land register.

In this they show, for each holding—

- (1) the survey and subdivision number assigned to it in the former survey ;
- (2) its survey number and subdivisions according to the existing survey ;
- (3) the class and sort of soil and whether wet or dry ;
- (4) the rate of assessment per acre ;
- (5) area ;
- (6) actual assessment ;
- (7) the name of the pattadar according to the existing revenue accounts.

The above entries (3) to (7) are filled in from the accounts with the karnam.

Next come spaces for an exactly similar set of entries to show the same particulars as they will be after the resurvey and resettlement are complete.

Of these spaces the surveyors fill up only that intended for the name of the pattadar, and the name they enter is that of the enjoyer as found by a very summary and casual questioning of any village officer or village servant or ryot or anybody who pretends to know anything about it.

On the completion of this stage of their work the survey send to the special staff the following records :—

(i) A khandam location sketch showing the boundaries of holdings according to the limits existing on the ground.

(ii) Field maps in which the measurements of the holdings as marked in the eye-sketches are shown.

(iii) The rough land register referred to above.

(iv) A rough area list showing the unchecked areas of the survey numbers and subdivisions as found by the field-surveyors.

The special staff in the Trichinopoly district have two main functions—

(1) The revision of the revenue registry of holdings and the bringing of it up to date.

(2) What is known as miscellaneous accounts inspection.

When revising the revenue registry, the special staff make use of the entry by the survey in the land register as to the name of the enjoyer of each holding. The correctness of this entry has to be verified. An enjoyer may be legally in possession and still be a lessee of a mortgagee and not entitled to the patta. The name may be entirely wrong. If the name of the enjoyer is correct but is found to be that of a different man from the man registered as pattadar in the latest revenue (karnam's) account, then the special staff has to examine his title, verify his sale-deeds or obtain the written consent of the registered pattadar or verify long enjoyment for over the statutory period or whatever may be necessary.

Under the heading miscellaneous accounts inspection are grouped many duties.

The special staff has to verify the correctness of the demarcation by the survey of the boundaries of all Government property (whatever department may be in actual charge of it).

If they find that Government land classed as poramboke and reserved is not required by Government, they transfer it to assessed waste and render it available for assignment to cultivating ryots. Where assessed waste lands have been cultivated without objection (on what is known as a sivoijama tenure) the special staff are empowered under a summary procedure to assign the lands on patta to the occupier. The special staff examine the boundaries of registered wet ayacuts. If any registered dry lands require to be transferred to wet, they attend to it and vice versa.

If ayacuts under different sources should touch one another, the boundary between them is checked and if any change of source is required it is made. If any tanks are found to exist for whose construction no proper authority is forthcoming are verified to see that the area of land exempt from Government assessment has not increased.

When the revenue on lands has been alienated on condition that they should be used for a specific purpose, it is examined whether the purpose is being fulfilled.

The correctness of any money-rate of assessment imposed by the Revenue Department has to be verified.

They also examine any discrepancies noticed in the survey records.

The inquiries and inspection necessary for the revision of registry and for the disposal of these miscellaneous items are all done together by the special staff.

When the special staff inspection is complete, the records are returned to the Survey with a list of cases (and the necessary sketches) in which alterations of the survey boundaries have been found necessary.

FURTHER WORK BY THE SURVEY DEPARTMENT.

These supplemental subdivisions or alterations are attended to, and the Survey department goes on with other survey processes to get the record of measurement out in its more or less final form.

Briefly, the fields are plotted in the skeleton of the village map, field areas computed from the map and from the field measurement books, the two sets of areas compared and recomputation done in cases of discrepancies. The area of the village by fields is thus found and compared with the area obtained from the theodolite traverses. The source of any difference is traced and the true areas of fields and subdivisions entered in the atlas of field maps which are returned to the Special Staff office bound up together into the volumes which form the ordinary field-measurement book.

SPECIAL STAFF.

With the return of the survey records with the supplemental subdivisions asked for during miscellaneous accounts inspection, duly measured up, the Special Staff office are able to correct the land register up to date embodying all changes of registry and all changes in miscellaneous matters that have been ordered by the special staff field party.

The correction of the land register being complete, the next thing is to collect up into single pattas all the lands owned by the different pattadars in the village. This is done and these pattas (rough pattas) are issued in the village. In the rough patta the ryots are told if they have any grievances connected with their pattas to attend at a certain place (to be named which will be either in the village or within five miles of it) on a certain date when a gazetted officer of the Settlement Party and the village officers will be present with the records to hear and dispose of all objections. On these occasions the procedure is summary and no adjournments are granted. On completion of the objection hearing, any necessary further inspection is done, any consequent supplemental subdivisions are measured and the land register is finally corrected.

The land register omitting certain entries referring only to the previous survey and settlement is fair-copied out to form the Karnam's Fair Adangal and the various fields held by each pattadar according to the adangal are collected up together to form a separate account for each pattadar. The volume in which this is written is the Fair Chitta, and the pattas finally issued to ryots by the Revenue department are only copies of the entries relating to individual pattadars as found in the Fair Chitta. The above represents the procedure followed in taluks where a resurvey is carried out and revenue registry is revised without any considerations of the closing of the period of a settlement and of alterations that may have to be made consequent upon Government orders varying the rates of assessment.

When fixing the amount of kist to be collected from a ryot, two things have to be known—

- (a) the areas of his different fields, and
- (b) the rate per acre of assessment that is to be levied upon the different fields.

The areas of the fields are fixed by the survey.

The rates of assessment per acre are liable to be altered owing to changes taking place on the ground which have no connexion with re-settlement.

Water-supply may improve and dry fields come under wet cultivation. A tank may be irreparably breached so that its ayacut can yield only dry crops.

Such changes are made by the special staff.

There remain changes in the rates of assessment owing to Government, so to speak, making fresh terms in their contracts over land revenue with the ryots for the ensuing period of 30 years of the new Settlement.

The fixing of the new rates is the primary work of the Settlement staff.

The resurvey and the revision of registry and the miscellaneous accounts inspection are generally carried out just before a resettlement as a matter of convenience.

When one alters the amounts of assessment it is only a matter of justice that each ryot should be furnished with a statement showing the amount to be paid by him in future.

As it is particularly necessary, at the time of a re-settlement in order to be able to give the ryots accurate information, it is at this time that is done the periodical overhauling or spring-cleaning of the revenue accounts caused by the inability of the Revenue department or Maintenance department to keep the accounts up to date.

Survey again. On completion of the re-settlement work a notice is sent to each pattadar by the Survey Officer showing the survey and subdivision numbers registered in his name and their areas inviting the submission of any complaint he may have against survey within three months of the receipt of the notice.

The difference between the surveys made in the Madras Presidency and those in other parts of India is, speaking generally, that in Madras any ryot can question the correctness of survey demarcation while it is in progress and for three months after he has received a notice stating exactly what is registered in his name. He can obtain a plan to scale of any of his holdings, for four annas, showing all measurements, and is thereby safeguarded against encroachment as any point can be relaid at any time. Outside the Madras Presidency the village map is generally the only map available. It is drawn in field, no record of measurements being kept, and boundaries of fields shown on it cannot be laid out correctly on the ground.

RESETTLEMENT WORK PROPER.

In order to fix dry rates, soils are divided up into main classes as follows:—

Black clay, black loam, red sand and red loam, etc.

Then again each class is subdivided into sorts as

best black clay,
good black clay,
ordinary black clay,
poor black clay,
worst black clay.

At the original settlements crop experiments were made on these sorts of soil to determine what outturn of a standard good grain that particular sort of soil would yield and also to determine the costs of cultivation that would be incurred in obtaining that outturn. The Government demand, it was laid down, should not exceed half the net outturn, i.e., half the price of the crop minus the cost of raising it.

Certain deductions were again allowed for unprofitable areas and so the standard rates for dry crops were arrived at. By standard rates are meant the rates in areas where communications are good and the cost of getting the crops to market is small.

In other areas communications are not so good, and in still others, villages may be extremely remote from markets and the cost of cartage to a market may be large.

To allow for this, the standard rates arrived at as above are imposed on villages where communications are good, and these villages are placed in the first group; villages where communications are inferior are placed in a second group in which rates somewhat less than the standard rates are levied. Still worse villages are placed in a third group.

Thus dry rates are fixed.

As regards wet rates again soils are divided out into classes and sorts as for dry lands.

But the yield of the crops is determined practically as much by the quality of the water-supply as by the quality of the soil.

Consequently, sources are divided up into classes.

According to modern practice, the number of these classes is five—

First class	sources are exceptionally good.
Second	yield a supply for eight months and over.
Third	for five months and less than eight months.
Fourth	for three " five months.
Fifth	for less than three months.

Then, again, crop experiments have been made to determine the outturns and cultivation on soils of the various classes and sorts accordingly as they are served by irrigation sources of the first, second, third, fourth or fifth classes.

Again, the Government demand is not to exceed half the net outturn.

At a resettlement normally no attempt is made to calculate grain outturns afresh.

One would not expect that soils had altered in their classes and sorts unless a new irrigation system or something had been altering the face of the country. Normally one's expectations would be justified, but unfortunately some old settlements were either done when settlement procedure was still in its infancy and very indefinite, or were done without the care that might have been expected. In some districts the soil classification requires a re-examination.

As regards the grouping of dry villages, the building of a railway, the making of new roads, and the opening of new markets may cause great changes in the cost of getting produce to market. The dry grouping requires examination.

As regards source classification, if sources were once classified correctly unless the water-supply was altered by some large improvement, one would expect no change to be necessary.

Unfortunately, however, in the older settlements sources were assigned an average classification according to the area they happened to be in, i.e., in a fifth class source area every source from an ancient channel to a rain-fed tank half way up an hillside are termed fifth class sources.

Consequently, rates may bear very unequally, and rates for composition for a second crop may be in some cases absurdly low and in other cases impracticably high.

The source classification requires examination.

Then there comes the compilation of the various statistics and of the reports which have been prescribed in the Resettlement Manual from which one may judge whether the previous settlement has been a fair and equitable one, and whether it has tended to bear harshly on any particular tract.

By this time it will have been seen whether the frame work of the preceding settlement was sound and whether it is possible to fix the new rates for the coming settlement with reference to alterations in values alone or whether any alteration in the frame work is required first.

Once the soil and source classification and dry group is found to need no alteration or when any alterations required have been done, there remains only to fix the necessary alterations in the money rates.

For this are required particulars of the average prices of staple food grains for the 20 non-famine years preceding the resettlement.

Alternately and preferably, where possible, when lands are leased out and fetch their full-economic rent, the net outturn from the land can be arrived at from the lease values.

For this purpose an examination of sale and lease deeds registered in Sub-Registrar's offices has to be made and statistics have to be compiled.

Economic inquiry.—In pursuance of a Legislative Council resolution in 1917, necessary instructions were issued to the Settlement Officers to examine the economic condition of a few families in a few villages of the area proposed to be settled. These inquiries are also made and the results reported.

With the materials obtained above, the Settlement Officer compiles a scheme report which is submitted for orders. On this report final orders as to any modification of the settlement frame work on which the rates are imposed are obtained, and final orders are passed as to the actual rates to be levied on each class and sort of soil according to its dry grouping or wet source classification.

Changes that may be necessary consequent on the above orders are made in the land register, rough pattas are issued, objections heard and fair accounts issued to the Revenue Department as described above.

Introduction report.—On the conclusion of settlement operations in a taluk, the Settlement Officer draws up and submits to the Board a report containing a brief account of the changes introduced at resettlement in the previously existing land revenue system and indicating clearly the financial and economic results of the resettlement.

Questions for consideration of the Committee.

1. *What information should be maintained by Government as to holders of land and areas held by them?*—At present the basis of all the records kept by the Government in a village is the settlement register. This contains the following information:—

- (1) Survey number.
- (2) Subdivision letter.
- (3) Old survey number and letter, if any.
- (4) Government or inam.
- (5) Dry, wet, unassessed or poramboke.
- (6) Source of irrigation.
- (7) Single or double crop.
- (8) Class and sort of soil.
- (9) Taram.
- (10) Rate per acre.
- (11) Extent.
- (12) Assessment.
- (13) Remarks.

From this there is written year by year an account known as the adangal which contains the same information, but is or should be corrected from year to year in respect of the names of the holders of the various survey fields. The karnam is required to keep also an account showing how each field is cultivated in each month of the year; an account showing the lands which are cultivated but for which no patta is held by the ryots; an account showing the charges due for water other than those covered by the wet assessment; accounts showing other miscellaneous items of revenue. There is also a single village account which shows the fields contained in each patta held by each ryot. The settlement register on which these other accounts are based is prepared as shown by the note on the work of the special staff.

2. *Is it necessary to survey every revenue holding irrespective of the size or class of land (e.g., can limit be set)?*—At present every holding is not demarcated separately, but holdings up to an extent of 5 acres in wet and 10 acres in dry are first clubbed and formed into a single survey field and surveyed and demarcated. In a survey field so formed each revenue field will form a subdivision if held by a separate individual. For practical purposes of account there is little difference between a survey field and a subdivision since each subdivision is separately shown in the settlement register and all the other accounts and all the details given in question 1 are maintained. But no stones are now placed for subdivisions. For the purpose of calculation of revenue it is not necessary to make all these subdivisions. If they were not made, the field would be shown in one joint patta under the names of all the persons holding portions of it. Under the Revenue Recovery Act each person whose name is shown in the patta would be a landholder and each one of them would be jointly and severally responsible for the payment of the land revenue due on the lands shown under the patta. In case of default it would be lawful for the Government to proceed against any one of these persons or against any portion of the land contained in the joint patta for the whole sum due. The advantage of the detailed survey is that each man has a separate patta for his separate portion of the survey field and is responsible only for the revenue on the portion which is his own private property.

3. *Should correct survey records be kept of every revenue holding.*—It has been pointed out in the course of inquiry by the Survey and Land Records Committee that the ryot who pays Government revenue demands in return a record of his holdings 'sufficiently minute to serve as an authoritative safeguard against encroachments by his neighbour'. The recommendation of the Committee was that a correct record of measurement should be maintained and the Government have accepted the recommendation. The records that are now maintained which are essential to ryots are (1) the field measurement book in which are given the correct record of measurement and the number of stones planted and (2) the village map. It is possible by means of these records to show the exact demarcation of each field in the village and to replace any stone which may have been missing or which may have been accidentally or unlawfully removed. Again, it is not necessary for the purpose of calculation of revenue that these accounts should be maintained. It would be sufficient for the Government to measure once for all the area to which each ryot is entitled and thereafter to collect the revenue from him, leaving him to protect his own boundary against encroachments by his neighbour or to get the exact line of demarcation laid down by a Civil Court in case it was not possible to determine it otherwise.

4. *To what extent should different holdings or different classes of land be demarcated.*—Previous to 1916 all bends of survey fields were demarcated. The Survey and Land Records Committee considered that so far as fields other than porambokes were concerned, it would be sufficient for administrative purposes to confine demarcation to field trijunctions and theodolite stations. Although most of the ryots examined by the Committee expressed a preference for the demarcation of bends of fields and bends of sub-divisions, they were not prepared to meet the expense involved, and the Committee came to the conclusion that what the ryots required was only an authoritative record of measurement by means of which their boundaries could be shown them. The Board agreed with the view and also said that the ends of diagonal lines which do not coincide with field trijunctions or theodolite stations should also be demarcated. The Government accepted the recommendation.

It is a matter which the Committee may discuss how far it is necessary to place and maintain stones at all bends in the boundaries of patta fields. They serve the double purpose of showing the ryot where his property ends and where that of his neighbour begins and of facilitating the karnam's work of measuring up fresh sub-divisions, etc., but it is a question partly of practical convenience and partly of expense to decide how many of such stones and at what points are necessary.

5. Should it be decided that some of the items of work now done in course of survey be eliminated, is it the opinion of the Conference that such work may be done if the ryot is willing to pay for it?

6. Can the process of survey or revision of adangals (or preparation of the survey records) be cheapened? And if so, can the members suggest any method?

7. Can the members suggest any method by which the process of resettlement of the assessment be cheapened?

